

## SEQUENCE LISTING

<110> MedImmune Vaccines, Inc.  
Cheng, Xing  
Park, Hyun J  
Jin, Hong

<120> COMPOSITIONS AND METHODS INVOLVING RESPIRATORY SYNCYTIAL VIRUS SUBGROUP B STRAIN 9320

<130> 26-003820US

<160> 54

<170> PatentIn version 3.1

<210> 1  
<211> 15225  
<212> DNA  
<213> respiratory syncytial virus B 9320

<400> 1  
acgcgaaaaa atgcgtacta caaacttgca cattcgaaaa aaatggggca aataagaatt 60  
tgataagtgt tatttaagtc taacctttc aatcagaaat ggggtgcaat tcattgagca  
tgataaaaggt tagattacaa aatttatttg acaatgacga agtagcattg ttaaaaataa 120  
catgttatac tgacaaattha attcttctga ccaatgcatt agccaaagca gcaatacata  
caattaaatt aaacggcata gttttatac atgttataac aagcagtgaa gtgtgccctg 180  
ataacaatat tgttagtgaaa tctaacttta caacaatgcc aatattacaa aacggaggat  
acatatggga attgattgag ttgacacact gctctcaatt aaatggtcta atggatgata 240  
attgtgaaat caaattttct aaaagactaa gtgactcagt aatgactgat tatatgaatc  
aaatatctga tttacttggg cttgatctca attcatgaat tgtgttagt ctaattcaat 300  
agacatgtgt ttattaccat tttagttaat ataaaaactc atcaaagaga aatggggcaa 360  
ataaaactcac ctaatcagtc aaatcatgag cactacaaat aacaacacta ctatgcaaag  
attgatgatc acagacatga gaccctgtc gatggaatca ataataacat ctctcaccaa 420  
agaaatcata acacacaaat tcataactt gataaacaat gaatgtattg taagaaaact  
tgtatgaaaga caagctacat tcacattcct agtcaattat gagatgaagc tactacacaa 480  
agttagggagt accaaatata agaaatacac tgaatataat acaaaatatg gcactttccc  
tatgcctata tttatcaatc atggcgggtt tctagaatgt attggcatta agcctacaaa 540  
acacactcct ataataataca aatatgacct caaccgtaa attccaacaa aaaactaacc  
catccaaact aagctattcc ttaaataaca gtgctcaaca gttaagaagg ggctaattca 600  
ttttagtaat taaaaataaa ggttaaagcca ataacataaa ttggggcaaa tacaaagatg 660  
1020  
1080  
1140

gctcttagca aagtcaagtt aaatgataca ttaaataagg atcagctgct gtcatctagc	1200
aaatacacta ttcaacgtag tacaggagat aatattgaca ctcccaatta tgatgtgcaa	1260
aaacacttaa acaaactatg tggtatgcta ttaatcactg aagatgcaaa tcataaattc	1320
acaggattaa taggtatgtt atatgctatg tccaggttag gaagggaga cactataaag	1380
atacttaaag atgctggata tcatactaaa gctaattggag tagatataac aacatatcgt	1440
caagatataa atggaaagga aatgaaattc gaagtattaa cattatcaag cttgacatca	1500
gaaatacaag tcaatattga gatagaatct agaaagtcc acaaaaaaaaat gctaaaaagag	1560
atgggagaag tggctccaga atataggcat gattctccag actgtggat gataatactg	1620
tgtatacgact cacttgtaat aaccaaatta gcagcaggag atagatcagg tcttacagca	1680
gtaatttagga gggcaaacaa tgtctaaaa aacgaaataa aacgctacaa gggcctcata	1740
ccaaaggata tagctaacag ttttatgaa gtgtttgaaa aacaccctca tcttatacgat	1800
gttttgtgc actttggcat tgcacaatca tccacaagag gggtagtag agttgaagga	1860
atctttgcag gattatttat gaatgcctat ggtcagggc aagtaatgct aagatgggga	1920
gttttagcca aatctgtaaa aaatatcatg ctaggacatg ctagtgcctca ggcagaaatg	1980
gagcaagttg tggaaagtcta tgagtatgca cagaagttgg gagagaaagc tggattctac	2040
catatattga acaatccaaa agcatcattt ctgtcataa ctcaatttcc taacttctca	2100
agtgtgtcc taggcaatgc agcaggtcta ggcataatgg gagagtatag aggtacacca	2160
agaaaaccagg atctttatga tgcagccaaa gcatatgcag agcaactcaa agaaaatgga	2220
gtaataaact acagtgtatt agacttaaca gcagaagaat tggaggccat aaagcatcaa	2280
ctcaacccca aagaagatga tgttagagctc taagtttaca aaaaatacgg ggcaaataag	2340
tcaacatgga gaagtttgc cctgaatttc atggagaaga tgcaaataac aaagctacca	2400
aattcctaga atcaataaaag ggcaagttcg catcatccaa agatcctaag aagaaagata	2460
gcataatatac tgttaactca atagatatacg aagtaactaa agagagccccg ataacatctg	2520
gcaccaacat caacaatcca acaagtgaag ctgacagtac cccagaagcc aaaaccaact	2580
acccaagaaa acccctagta agcttcaaag aagatctcac cccaaatgtac aacccctttt	2640
ctaagttgtt caaagaaaca atagaaacat ttgataacaa tgaagaagaa tctagctact	2700
catatgaaga aataaaatgat caaacaaatg acaacattac agcaagacta gatagaattt	2760
atgaaaaatt aagtgaaata ttaggaatgc tccatacatt agtagttgca agtgcaggac	2820
ccacttcagc tcgcgatgga ataagagatg ctatggttgg tctaagagaa gaaatgatag	2880

aaaaaaataag	agcggaagca	ttaatgacca	atgataggtt	agaggctatg	gcaagactta	2940
ggaatgagga	aagcgaaaaa	atggcaaaag	acacctcaga	tgaagtgtct	ctcaatccaa	3000
cttccaaaaa	attgagtgac	ttgctggaag	acaacgatag	tgacaatgat	ctatcacttg	3060
atgattttg	atcagtgatc	aactcactca	gcaatcaaca	acatcaataa	gacagacatc	3120
aatccattga	atcaactgcc	agaccgaaca	aacaaacgtt	catcagcaga	accaccaacc	3180
aatcaatcaa	ccaattgatc	aatcagcaac	ctaacaaaat	taacaatata	gtaacaaaaa	3240
aagaacaaga	tggggcaaata	atggaaacat	acgtgaacaa	gcttcacgaa	ggctccacat	3300
acacagcagc	tgttcagtac	aatgttctag	aaaaagatga	tgatcctgca	tcactaacaa	3360
tatgggtgcc	tatgttccag	tcatctgtgc	cagcagactt	gctcataaaa	gaacttgcaa	3420
gcatcaacat	actagtgaag	cagatctcta	cgtccaaagg	accttcacta	cgagtcacga	3480
tcaactcaag	aagcgctgtg	ctggcacaaa	tgcccagtaa	ttttatcata	agtgc当地atg	3540
tatcattaga	tgaaagaagc	aaattagcat	atgatgtAAC	tacaccttgt	gaaatcaaag	3600
catgcagtct	aacatgctta	aaagtaaaaa	gtatgctaac	tacagtcaaa	gatcttacca	3660
tgaaaacatt	caaccccact	catgagatta	ttgctctatg	tgaatttgaa	aatattatga	3720
catcaaaaaag	agtaataata	ccaacctatc	taagatcaat	tagtgc当地aa	aacaaggacc	3780
tgaactcact	agaaaatata	gcaaccaccg	aattcaaaaa	tgctatcacc	aatgc当地aaa	3840
ttattcccta	tgcaggatta	gtatttagtt	tcacagttac	tgacaataaa	ggagcattca	3900
aatatatcaa	gccacagagt	caatttatag	tagatcttgg	agcctaccta	gaaaaagaga	3960
gcatatatta	tgtgactaca	aatttggaaagc	atacagctac	acgttttca	atcaaaccac	4020
tagaggatta	aacttaattt	tcaacgctaa	atgacaggc	cacatatatc	ctcaaactac	4080
acactatatac	caaacatcat	gaacatctac	actacacact	tcatcacaca	aaccaatccc	4140
acttaaaaatc	caaaatcact	tccagccact	atctgctaga	cctagagtgc	gaataggtaa	4200
ataaaaaccaa	aatatgggg	aatagacat	tagttagagt	tcaatcaatc	tcaacaacca	4260
tttatactgc	taattcaata	cataactat	aaattcaaa	atggaaata	catccatcac	4320
aatagaattc	actagcaaata	tttggcctta	ttttacacta	atacatatga	tcttaactct	4380
aatctcttta	ctaattataa	tcactattat	gattgcaata	ctaaataagc	taagtgaaca	4440
taaaacattc	tgtaacaaaa	ctcttgaact	aggacagatg	tatcaaatca	acacatagtg	4500
ttctaccatc	atgctgtgtc	aaattataat	cctgtatatg	taaacaacaca	aatccatct	4560
tctcacagag	tcatggtggc	gcaaagccac	gccaaactatc	atggtagcat	agagtagtta	4620
tttaaaaatt	aacataatga	tgaatttata	gtatgggatc	aaaaacacacaa	ttggggcaaa	4680

tgcaaccatg tccaaacaca agagtcaacg cactgccagg actctagaaa agacctggga	4740
tactcttaat catctaattt gttttatac agactaaacc taaaatctat	4800
agcacaaata gcactatcg tttggcaat gataatctca acctctctca taattgcagc	4860
cataatattc atcatctctg ccaatcacaa agttacacta acaacggta cagttcaaacc	4920
aataaaaaac cacactgaaa aaaacatcac cacctaccc actcaagtct caccagaaag	4980
ggtagctca tccatacaac ctacaaccac atcacaatc cacacaaatt cagctacaat	5040
atcaccaat acaaaatcg aaacacacca tacaacaaca caagccaaaa gcagaatcac	5100
cacttcaaca cagaccaaca agccaagcac aaaatcacgt tcaaaaaatc caccaaaaaa	5160
acccaaagat gattaccatt ttgaagtgtt caatttgtt ccctgttagta tatgtggcaa	5220
caatcaactt tgcaaattcca tctgcaaaac aataccaagc aacaaaccaa agaaaaaacc	5280
aaccatcaaa cccacaaaca accaaccgt caaaaccaca aacaaaagag acccaaaaac	5340
accagccaaa atgatgaaaa aagaaaccac caccaaccca aaaaaaaaaac caaccctcaa	5400
gaccacagaa ggagacacca gcacctcaca atccactgtg ctgcacacaa ccacatcaaa	5460
acacacaatc caacagcaat ccctccactc aatcacctcc gaaaacacac ccaactccac	5520
acaaataccc acagcaaccg aggccctccac atcaaattct actaaaaaaa cctagtcaca	5580
tgcttagtta ttcaaaaact acatcttagc agagaaccgt gatctatcaa gcaagaatga	5640
aattaaacct ggggcaaata accatggagt tgctgatcca caggtcaagt gcaatcttcc	5700
taactcttgc tattaatgca ttgtacctca cctcaagtca gaacataact gaggagttt	5760
accaatcgac atgttagtgca gttagcagag gttattttag tgcttaaga acaggttgt	5820
ataccagtgt tataacaata gaattaagta atataaaaga aaccaaattgc aatggaaactg	5880
acactaaagt aaaacttata aaacaagaat tagataagta taagaatgca gtaacagaat	5940
tacagctact tacgcaaaac acgccagctg ccaacaaccg ggcagaaga gaagcaccac	6000
agtacatgaa ctacacaatc aataccacta aaaacctaaa cgtatcaata agcaagaaga	6060
ggaaacgaag atttctggga ttctttagt gttaggatc tgcaatagca agtggatag	6120
ctgtatccaa agttctacac cttgaaggag aagtgaacaa aatcaaaaat gctttgtt	6180
ctacaaacaa agctgttagtc agtctatcaa atggggtcag tgtttaacc agcaaagtgt	6240
tagatctcaa gagttacata aataaccaat tattacccat agtaaatcaa cagagctg	6300
gcatctccaa cattgaaaca gttatagaat tccagcagaa gaacagcaga ttgttgaaa	6360
tcaccagaga atttagtgca aatgcaggtg taacaacacc tttaagcact tacatgtt	6420

caaacagtga gttactatca ttgatcaatg atatgcctat aacaaatgat cagaaaaaat	6480
taatgtcaag caatgtccag atagtaaggc aacaaaggtt ttcttatcatg tctataataa	6540
aggaagaagt ccttgcatat gttgtacagc tacctatcta tgggtgtata gatacacctt	6600
gctggaaatt acacacatca cctctatgca ccaccaacat caaagaagga tcaaataattt	6660
gtttaacaag gactgataga ggatggtatt gtgataatgc aggatcagta tccttcttcc	6720
cacaggctga cacttgcaaa gtgcagtcca atcgagtatt ttgtgacact atgaacagtt	6780
tgacattacc aagtgaagtc agccttgta acactgacat attcaattcc aagtatgact	6840
gcaaaatcat gacttcaaaa acagacataa gcagctcagt aattacttct cttggagcta	6900
tagtgtcatg ctatggtaaa actaaatgca ctgcattccaa taaaaatcgt gggattataa	6960
agacattttc taatggttgt gactatgtgt caaacaaagg agtagatact gtgtcagtgg	7020
gcaacacttt atactatgta aacaagctgg aaggcaaaaa cctttatgta aaaggggaac	7080
ctataataaa ttactatgat cctctagtgt ttcccttctga tgagtttgat gcatcaatat	7140
ctcaagtcaa tgaaaaaaatc aatcaaagtt tagctttat acgttagatct gatgaattac	7200
tacataatgt aaatactggc aaatctacta caaatattat gataaccaca atcattatag	7260
taatcattgt agtattgtt tcattaatag ctattggttt actgttgat tgcaaagcta	7320
aaaacacacc agttacacta agcaaagacc aactaagtgg aatcaacaat attgcattca	7380
gcaaataagac aaaaaaccac ttgatcatgt ttcaacaaca atctgctgac caccaatccc	7440
aaatcaactt aacaacaaat atttcaacat catagcacag gctgaatcat ttccctcacat	7500
catgctacct acacaactaa gctagatcct taactcatag ttacataaaa acctcaagta	7560
tcacaatcaa acactaaatc gacacatcat tcacaaaatt aacaactggg gcaaataatgt	7620
cgcgaagaaa tccttgtaaa tttgagatta gaggtcattt cttgaatggt agaagatgtc	7680
actacagtca taattatTTT gaatggcctc ctcattgcatt actagtgagg caaaacttca	7740
tgttaaaca a gatacttaag tcaatggaca aaagcataga cactttgtcg gaaataagt	7800
gagctgctga actggataga acagaagaat atgctttgg tatagttgg gtgctagaga	7860
gttacatagg atctataaaac aacataacaa aacaatcagc atgtgttgct atgagtaaac	7920
ttcttattga gatcaacagt gatgacatta aaaaactgag agataatgaa gaacccaaatt	7980
cacctaagat aagagtgtac aatactgtt a tatcatacat tgagagcaat agaaaaaaaca	8040
acaagcaaac catccatctg ctcaaaagac taccaggcaga tgtgctgaag aagacaataa	8100
agaacacatt agatatccac aaaagcataa ccataagcaa cccaaaagag tcaaccgtga	8160
atgatcaaaa tgaccaaacc aaaaataatg atattaccgg ataaatatcc ttgttagtata	8220

tcatccatac tgatttcaag tgaaagcatg gttgccacat tcaatcacaa aaacatatta	8280
caatttaacc ataaccattt ggataaccac cagtgttat taaatcatat atttgatgaa	8340
attcatggc cacctaaaaa cttatttagat accactcaac aatttctcca acatcttaac	8400
atcccgtgaag atatatatac agtatatata ttatgtcat aatgcttgac cataacgatc	8460
ttatatacatac caaccataaa actatcataa taaggttatg ggacaaaatg gatcccattt	8520
ttaatggaaa ctctgctaat gtgtatctaa ctgatagttt tctaaaaggt gttatcttt	8580
tttcagaatg taatgcttta gggagttacc tttttacgg cccttatctt aaaaatgatt	8640
acactaactt aatttagtataa caaagcccc tactagagca tatgaatcta aaaaaactaa	8700
ctataacaca gtcattaata tctagatatc ataaagggtga actgaaatata gaagaaccaa	8760
cttatttcca gtcattactt atgacatataa aaagtatgtc ctcgtctgaa caaattgcta	8820
caactaactt actttaaaaaa ataatacgaa gagctataga aataagtgtatgtaa	8880
acgccccatctt gaataaaacta ggactaaagg aaaaggacag agttaagccc aacaataatt	8940
caggtgatga aaactcagttt cttacaacca taattaaaga tgatatactt tcggctgtgg	9000
aaaacaatca atcatataca aattcagaca aaaatcactc agtgaaccaa aatatacata	9060
tcaaaaacaac actcttgaaa aaattgtatgt gttcaatgca acatcctcca tcattgtttaa	9120
tacactggtt caatttatatac aaaaaattaa ataacatattt aacacaatata cgatcaaatg	9180
aggtaaaaaag tcatgggttt atattaatag ataatcaaac tttaagtgggt tttcagttta	9240
ttttaaatca atatgggtgtt attgtttatc ataaaggact taaaaaaaatc acaactacta	9300
cttacaatca atttttgaca tggaaagaca tcagccttag cagattaaat gtttgcttaa	9360
ttacttggat aagtaattgtt ttaaatacat taaataaaag cttagggtcg agatgtggat	9420
tcaataatgt tttgttatca caatttatttc tttatggaga ttgtatactg aaatttatttc	9480
ataatgaagg cttctacata ataaaaagaag tagaggattt tattatgtct ttaattctaa	9540
acataacaga agaagatcaa tttaggacac gatTTTataa cagcatgcta aataacatca	9600
cagatgcagc tattaaggctt caaaaaaaaacc tactatcaag agtatgtcac actttattgg	9660
acaagacagt gtctgataat atcataaaatg gtaaatggat aatccttata agtaaaatttc	9720
ttaaattgtatgt ttaagcttgca ggtgataata atctcaataa cttgagtgag ctatatttc	9780
tcttcagaat cttggacat ccaatggtcg atgaaagaca agcaatggat gctgtaagaa	9840
ttaactgtaa tgaaactaag ttctacttat taagtagtct aagtacgtta agaggtgctt	9900
tcatttataatg aatcataaaaaa gggtttggtaa atacctacaa cagatggccc actttaagga	9960

atgctattgt tctacctcta agatggttga actattataa acttaatact tatccatctc 10020  
tacttgaat cacagaaaat gatttgatta ttttatcagg attgaggttc tatcgtagt 10080  
ttcatctgcc taaaaaaagtg gatctgaaa tgataataaa tgacaaagcc atttcacctc 10140  
caaaagatct aatatggact agtttccca gaaattacat gccatcacat atacaaaatt 10200  
atatagaaca tgaaaagttg aagttctctg aaagcgacag atcaagaaga gtactaggt 10260  
attacttgag agataataaa ttcaatgaat gcgatctata caattgtgtg gtcaatcaa 10320  
gctatctcaa caactctaac cacgtggat cactaactgg taaagaaaaga gagctcagtg 10380  
taggtagaat gtttgctatg caaccaggta tgtttaggca aattcaaattc ttagcagaga 10440  
aaatgatagc cgaaaatatt ttacaattct tccctgagag tttgacaaga tatggtgatc 10500  
tagagcttca aaagatatta gaattaaaag caggaataag caacaaatca aatcgttata 10560  
atgataacta caacaattat atcagtaaat gttctatcat tacagacctt agcaaattca 10620  
atcaagcatt tagatatgaa acatcatgta tctgcagtga tgtatttagat gaactgcatg 10680  
gagtacaatc actgttctct tggttgcatt taacaatacc tcttgcaca ataatatgta 10740  
catatagaca tgcacccctt ttcataaagg atcatgttgt taatctgaat gaagttgatg 10800  
aacaaagtgg attatacaga tatcatatgg gtggatttga gggctggtgt caaaaactgt 10860  
ggaccattga agctatatca ttatttagatc taatatccct caaaggaaa ttctctatca 10920  
cagctctaattaaatggat aatcagtcattt tgatataaag taaaccagtt agacttata 10980  
agggtcagac ccatgctcaa gcagattatt tgtagcatt aaatagcctt aaattgctat 11040  
ataaaagagta tgcaggcata ggccataaagc tcaagggAAC agaaacctat atatccgag 11100  
atatgcaatt catgagcaaa acaatccagc acaatggagt gtactatcca gccagtgatc 11160  
aaaaagtcct gagagtaggtt ccatggataa atacaatact tgatgatttt aaagtttagtt 11220  
tagaatctat aggtagctta acacaggagt tagaatacag aggagaaaagc ttattatgca 11280  
gtttaatatt tagaaacatt tggttataca atcaaattgc tttgcaactc cgaaatcatg 11340  
cattatgtca caataagcta tatttagata tattgaaagt attaaaacac ttaaaaactt 11400  
tttttaatct tgatgtatc gatatggcat tattgtatc tatgaatttg cctatgctgt 11460  
ttggtggtgg tgatcctaattt tggttatatac gaagctttt tagaagaact ccagacttcc 11520  
ttacagaagc tatagtagcat tcagtgttt tggttagctt ttatactggt cacgatttac 11580  
aagataagct ccaggatctt ccagatgata gactgaacaa attcttgaca tgtatcatca 11640  
catttgataa aaatcccaat gccgagttt tggttagctt gaggatcca caggctttag 11700  
ggtctgaaag gcaagctaaa attacttagt agattaatag attagcagta acggaagtct 11760

taagtatagc tccaaacaaa atatttcta aaagtgcaca acattatact accactgaga 11820  
 ttgatctaaa tgatattatg caaaatatag aaccaactta ccctcatgga ttaagagttg 11880  
 tttatgaaag ttacccccc tataaagcag aaaaaatagt taatcttata tcaggaacaa 11940  
 aatccataac taatatactt gaaaaaacat cagcaataga tacaactgat attaataggg 12000  
 ctactgatat gatgaggaaa aatataactt tacttataag gatacttcca ctagattgt 12060  
 acaaagacaa aagagagtta ttaagtttag aaaatcttag tataactgaa ttaagcaagt 12120  
 atgtaagaga aagatcttgg tcgttatcca atatacttgg agtaacatcg ccaagtatta 12180  
 tgccacaat ggacattaaa tatacaacta gcactatagc cagtggtata attatagaaa 12240  
 aataataatgt taatagttt actcgtggtg aaagaggacc tactaagcca tggtaggtt 12300  
 catctacgca ggagaaaaaaa acaatgccag tgtataatag acaagttta accaaaaagc 12360  
 aaagagacca aatagatttta ttagcaaaat tagactgggt atatgcattcc atagacaaca 12420  
 aagatgaatt catggaagaa ctgagttactg gaacacttgg attgtcatat gaaaaagcca 12480  
 aaaaattgtt tccacaatata ctaagtgtca attatttaca ccgcttaaca gtcagtagta 12540  
 ggccatgtga attccctgca tcaataccag cttatagaac aacaattat catttcgata 12600  
 ctatccat caatcatgtt ttaacagaaa agtatggaga tgaagatatc gacatagtgt 12660  
 ttcaaaattt cataagttt ggtcttagcc taatgtcggt tgtggacaa ttcacaaaca 12720  
 tatgtcctaa tagaattattt ctcataccga agctgaatga gatacatttgc atgaaacctc 12780  
 ctatatttac aggagatgtt gatcatca aattgaagca agtgcataaa aaacagcaca 12840  
 tgcccttacc agataaaata agtttaaccc aatatgtaga attattccta agtaacaaag 12900  
 cacttaatc tggatctcac atcaactcta atttaatattt agtacataaa atgtctgatt 12960  
 attttcataa tgattatattt ttaagtacta atttagctgg acattggatt ctgattattc 13020  
 aacttatgaa agattcaaaa ggtatTTTg aaaaagattt gggagagggg tatataactg 13080  
 atcatatgtt cattaatttgc aatgtttct ttaatgcttta taagacttat ttgctatgtt 13140  
 ttccataaagg ttatggtaaa gcaaaatttgc aatgtgatgc gacacttca gatcttctt 13200  
 gtgtttggtaa gtaatagac agtagctact ggaaatctat gtctaaagtt ttccctagaac 13260  
 agaaagtcat aaaatacata gtcaatcaag acacaagttt gcatagaata aaagggttgtc 13320  
 atagttttaa gttgtggttt ttAAAACGCC ttaataatgc taaatttacc gtatgccctt 13380  
 gggttgttaa catagattat cacccaaacac acatgaaagc tatattatct tacatagatt 13440  
 tagttagaat ggggttaata aatgttagata aattaaccat taaaataaa aacaaattca 13500

atgatgaatt ttacacatca aatctttt atattagtta taactttca gacaacactc 13560  
atttgctaac aaaacaata agaattgcta attcagaatt agaaaataat tataacaac 13620  
tatatcaccc aaccccagaa actttagaaa atatgtcatt aattcctgtt aaaagtaaca 13680  
atagtaacaa acctaaatct tgtataagtg gaaataccga atctatgatg acgtcaacat 13740  
tctccaataa aatgcattt aaatcttcca ctgttaccac aagattaaac tatagcaaac 13800  
aagacttgta caatttattt ccaattgttg tgatagacag gattatagat cattcaggca 13860  
atacagcaaa atccaaccaa ct当地  
atagtgcattc actttattgc atgcttcattt ggcattcatgt caatagattt aactttgtat 13980  
ttagttccac aggatgcaag atcagttatag agtattttt aaaagatctt aagattaagg 14040  
acccccagttg tatagcattc ataggtgaag gagctggtaa cttatttattt cgtacggtag 14100  
tagaacttca tccagacata agatacattt acagaagttt aaaagattgc aatgatcata 14160  
gtttacctat tgaatttcta aggttataca acgggcatat aaacatagat tatggtgaga 14220  
atttaaccat tcctgctaca gatgcaacta ataacattca ttggtcttat ttacatataa 14280  
aatttgcaaa acctatttagc atctttgtct gcgatgctga attacctgtt acagccaatt 14340  
ggagtaaaat tataattgaa tggagtaagc atgtaagaaa gtgcaagtac tgccctctg 14400  
taaatagatg cattttattt gcaaaatatc atgctcaaga tgatattgtat ttcaaattt 14460  
ataacattac tatattaaaa acttatgtgt gccttaggtag caagttaaaa ggatctgaag 14520  
tttacttagt ctttacaata gccccttcaa atatacttcc tggttttaat gttgtcaaa 14580  
atgctaaattt gattcttca agaactaaaa atttcattt gcctaaaaaa actgacaaag 14640  
aatctatcga tgcaaatattt aaaagcttaa tacctttcct ttgttaccct ataacaaaaa 14700  
aaggaattaa gacttcatttgc tcaaaattga agagtgttagt taatggagat atattatcat 14760  
attctatagc tggacgtaat gaagtattca gcaacaagct tataaaccac aagcatatga 14820  
atatcctaaa atggcttagat catgtttaa actttagatc aactgaactt aattacaatc 14880  
atttatatat gatagagtcc acatatcattt acttaagtga attgttaaat agttaacaa 14940  
ccaatgagct caaaaagctg attaaaattt caggtgttagt actatacaac cttcccaatg 15000  
aacagtaact taaaatatca ttaacaagtt tggtcaaatt tagatgctaa cacatcatta 15060  
tattatagtt attaaaaat atgcaaactt ttcaataatt tagcatattt attccaaaat 15120  
tatctatattt ggtcttaagg ggttaataa aaatctaaaa ctaacaattt tacatgtgca 15180  
tttacaacac aacgagacat tagttttga cactttttt ctcgt 15225

<210> 2  
<211> 139  
<212> PRT  
<213> respiratory syncytial virus B 9320

<400> 2

Met Gly Cys Asn Ser Leu Ser Met Ile Lys Val Arg Leu Gln Asn Leu  
1 5 10 15

Phe Asp Asn Asp Glu Val Ala Leu Leu Lys Ile Thr Cys Tyr Thr Asp  
20 25 30

Lys Leu Ile Leu Leu Thr Asn Ala Leu Ala Lys Ala Ala Ile His Thr  
35 40 45

Ile Lys Leu Asn Gly Ile Val Phe Ile His Val Ile Thr Ser Ser Glu  
50 55 60

Val Cys Pro Asp Asn Asn Ile Val Val Lys Ser Asn Phe Thr Thr Met  
65 70 75 80

Pro Ile Leu Gln Asn Gly Gly Tyr Ile Trp Glu Leu Ile Glu Leu Thr  
85 90 95

His Cys Ser Gln Leu Asn Gly Leu Met Asp Asp Asn Cys Glu Ile Lys  
100 105 110

Phe Ser Lys Arg Leu Ser Asp Ser Val Met Thr Asp Tyr Met Asn Gln  
115 120 125

Ile Ser Asp Leu Leu Gly Leu Asp Leu Asn Ser  
130 135

<210> 3  
<211> 124  
<212> PRT  
<213> respiratory syncytial virus B 9320

<400> 3

Met Ser Thr Thr Asn Asn Asn Thr Thr Met Gln Arg Leu Met Ile Thr  
1 5 10 15

Asp Met Arg Pro Leu Ser Met Glu Ser Ile Ile Thr Ser Leu Thr Lys  
20 25 30

Glu Ile Ile Thr His Lys Phe Ile Tyr Leu Ile Asn Asn Glu Cys Ile

35

40

45

Val Arg Lys Leu Asp Glu Arg Gln Ala Thr Phe Thr Phe Leu Val Asn  
50 55 60

Tyr Glu Met Lys Leu Leu His Lys Val Gly Ser Thr Lys Tyr Lys Lys  
65 70 75 80

Tyr Thr Glu Tyr Asn Thr Lys Tyr Gly Thr Phe Pro Met Pro Ile Phe  
85 90 95

Ile Asn His Gly Gly Phe Leu Glu Cys Ile Gly Ile Lys Pro Thr Lys  
100 105 110

His Thr Pro Ile Ile Tyr Lys Tyr Asp Leu Asn Pro  
115 120

<210> 4

<211> 391

<212> PRT

<213> respiratory syncytial virus B 9320

<400> 4

Met Ala Leu Ser Lys Val Lys Leu Asn Asp Thr Leu Asn Lys Asp Gln  
1 5 10 15

Leu Leu Ser Ser Ser Lys Tyr Thr Ile Gln Arg Ser Thr Gly Asp Asn  
20 25 30

Ile Asp Thr Pro Asn Tyr Asp Val Gln Lys His Leu Asn Lys Leu Cys  
35 40 45

Gly Met Leu Leu Ile Thr Glu Asp Ala Asn His Lys Phe Thr Gly Leu  
50 55 60

Ile Gly Met Leu Tyr Ala Met Ser Arg Leu Gly Arg Glu Asp Thr Ile  
65 70 75 80

Lys Ile Leu Lys Asp Ala Gly Tyr His Val Lys Ala Asn Gly Val Asp  
85 90 95

Ile Thr Thr Tyr Arg Gln Asp Ile Asn Gly Lys Glu Met Lys Phe Glu  
100 105 110

Val Leu Thr Leu Ser Ser Leu Thr Ser Glu Ile Gln Val Asn Ile Glu

115	120	125
Ile Glu Ser Arg Lys Ser Tyr Lys Lys Met Leu Lys Glu Met Gly Glu		
130	135	140
Val Ala Pro Glu Tyr Arg His Asp Ser Pro Asp Cys Gly Met Ile Ile		
145	150	155
Leu Cys Ile Ala Ala Leu Val Ile Thr Lys Leu Ala Ala Gly Asp Arg		
165	170	175
Ser Gly Leu Thr Ala Val Ile Arg Arg Ala Asn Asn Val Leu Lys Asn		
180	185	190
Glu Ile Lys Arg Tyr Lys Gly Leu Ile Pro Lys Asp Ile Ala Asn Ser		
195	200	205
Phe Tyr Glu Val Phe Glu Lys His Pro His Leu Ile Asp Val Phe Val		
210	215	220
His Phe Gly Ile Ala Gln Ser Ser Thr Arg Gly Gly Ser Arg Val Glu		
225	230	235
Gly Ile Phe Ala Gly Leu Phe Met Asn Ala Tyr Gly Ser Gly Gln Val		
245	250	255
Met Leu Arg Trp Gly Val Leu Ala Lys Ser Val Lys Asn Ile Met Leu		
260	265	270
Gly His Ala Ser Val Gln Ala Glu Met Glu Gln Val Val Glu Val Tyr		
275	280	285
Glu Tyr Ala Gln Lys Leu Gly Gly Glu Ala Gly Phe Tyr His Ile Leu		
290	295	300
Asn Asn Pro Lys Ala Ser Leu Leu Ser Leu Thr Gln Phe Pro Asn Phe		
305	310	315
Ser Ser Val Val Leu Gly Asn Ala Ala Gly Leu Gly Ile Met Gly Glu		
325	330	335
Tyr Arg Gly Thr Pro Arg Asn Gln Asp Leu Tyr Asp Ala Ala Lys Ala		
340	345	350

Tyr Ala Glu Gln Leu Lys Glu Asn Gly Val Ile Asn Tyr Ser Val Leu  
355 360 365

Asp Leu Thr Ala Glu Glu Leu Glu Ala Ile Lys His Gln Leu Asn Pro  
370 375 380

Lys Glu Asp Asp Val Glu Leu  
385 390

<210> 5  
<211> 241  
<212> PRT  
<213> respiratory syncytial virus B 9320

<400> 5

Met Glu Lys Phe Ala Pro Glu Phe His Gly Glu Asp Ala Asn Asn Lys  
1 5 10 15

Ala Thr Lys Phe Leu Glu Ser Ile Lys Gly Lys Phe Ala Ser Ser Lys  
20 25 30

Asp Pro Lys Lys Asp Ser Ile Ile Ser Val Asn Ser Ile Asp Ile  
35 40 45

Glu Val Thr Lys Glu Ser Pro Ile Thr Ser Gly Thr Asn Ile Asn Asn  
50 55 60

Pro Thr Ser Glu Ala Asp Ser Thr Pro Glu Ala Lys Thr Asn Tyr Pro  
65 70 75 80

Arg Lys Pro Leu Val Ser Phe Lys Glu Asp Leu Thr Pro Ser Asp Asn  
85 90 95

Pro Phe Ser Lys Leu Tyr Lys Glu Thr Ile Glu Thr Phe Asp Asn Asn  
100 105 110

Glu Glu Glu Ser Ser Tyr Ser Tyr Glu Glu Ile Asn Asp Gln Thr Asn  
115 120 125

Asp Asn Ile Thr Ala Arg Leu Asp Arg Ile Asp Glu Lys Leu Ser Glu  
130 135 140

Ile Leu Gly Met Leu His Thr Leu Val Val Ala Ser Ala Gly Pro Thr  
145 150 155 160

Ser Ala Arg Asp Gly Ile Arg Asp Ala Met Val Gly Leu Arg Glu Glu  
165 170 175

Met Ile Glu Lys Ile Arg Ala Glu Ala Leu Met Thr Asn Asp Arg Leu  
180 185 190

Glu Ala Met Ala Arg Leu Arg Asn Glu Glu Ser Glu Lys Met Ala Lys  
195 200 205

Asp Thr Ser Asp Glu Val Ser Leu Asn Pro Thr Ser Lys Lys Leu Ser  
210 215 220

Asp Leu Leu Glu Asp Asn Asp Ser Asp Asn Asp Leu Ser Leu Asp Asp  
225 230 235 240

Phe

<210> 6  
<211> 256  
<212> PRT  
<213> respiratory syncytial virus B 9320

<400> 6

Met Glu Thr Tyr Val Asn Lys Leu His Glu Gly Ser Thr Tyr Thr Ala  
1 5 10 15

Ala Val Gln Tyr Asn Val Leu Glu Lys Asp Asp Asp Pro Ala Ser Leu  
20 25 30

Thr Ile Trp Val Pro Met Phe Gln Ser Ser Val Pro Ala Asp Leu Leu  
35 40 45

Ile Lys Glu Leu Ala Ser Ile Asn Ile Leu Val Lys Gln Ile Ser Thr  
50 55 60

Pro Lys Gly Pro Ser Leu Arg Val Thr Ile Asn Ser Arg Ser Ala Val  
65 70 75 80

Leu Ala Gln Met Pro Ser Asn Phe Ile Ile Ser Ala Asn Val Ser Leu  
85 90 95

Asp Glu Arg Ser Lys Leu Ala Tyr Asp Val Thr Thr Pro Cys Glu Ile  
100 105 110

Lys Ala Cys Ser Leu Thr Cys Leu Lys Val Lys Ser Met Leu Thr Thr  
115 120 125

Val Lys Asp Leu Thr Met Lys Thr Phe Asn Pro Thr His Glu Ile Ile  
130 135 140

Ala Leu Cys Glu Phe Glu Asn Ile Met Thr Ser Lys Arg Val Ile Ile  
145 150 155 160

Pro Thr Tyr Leu Arg Ser Ile Ser Val Lys Asn Lys Asp Leu Asn Ser  
165 170 175

Leu Glu Asn Ile Ala Thr Thr Glu Phe Lys Asn Ala Ile Thr Asn Ala  
180 185 190

Lys Ile Ile Pro Tyr Ala Gly Leu Val Leu Val Ile Thr Val Thr Asp  
195 200 205

Asn Lys Gly Ala Phe Lys Tyr Ile Lys Pro Gln Ser Gln Phe Ile Val  
210 215 220

Asp Leu Gly Ala Tyr Leu Glu Lys Glu Ser Ile Tyr Tyr Val Thr Thr  
225 230 235 240

Asn Trp Lys His Thr Ala Thr Arg Phe Ser Ile Lys Pro Leu Glu Asp  
245 250 255

<210> 7

<211> 65

<212> PRT

<213> respiratory syncytial virus B 9320

<400> 7

Met Gly Asn Thr Ser Ile Thr Ile Glu Phe Thr Ser Lys Phe Trp Pro  
1 5 10 15

Tyr Phe Thr Leu Ile His Met Ile Leu Thr Leu Ile Ser Leu Leu Ile  
20 25 30

Ile Ile Thr Ile Met Ile Ala Ile Leu Asn Lys Leu Ser Glu His Lys  
35 40 45

Thr Phe Cys Asn Lys Thr Leu Glu Leu Gly Gln Met Tyr Gln Ile Asn  
50 55 60

Thr  
65

<210> 8  
<211> 574  
<212> PRT  
<213> respiratory syncytial virus B 9320

<400> 8

Met Glu Leu Leu Ile His Arg Ser Ser Ala Ile Phe Leu Thr Leu Ala  
1 5 10 15

Ile Asn Ala Leu Tyr Leu Thr Ser Ser Gln Asn Ile Thr Glu Glu Phe  
20 25 30

Tyr Gln Ser Thr Cys Ser Ala Val Ser Arg Gly Tyr Phe Ser Ala Leu  
35 40 45

Arg Thr Gly Trp Tyr Thr Ser Val Ile Thr Ile Glu Leu Ser Asn Ile  
50 55 60

Lys Glu Thr Lys Cys Asn Gly Thr Asp Thr Lys Val Lys Leu Ile Lys  
65 70 75 80

Gln Glu Leu Asp Lys Tyr Lys Asn Ala Val Thr Glu Leu Gln Leu Leu  
85 90 95

Thr Gln Asn Thr Pro Ala Ala Asn Asn Arg Ala Arg Arg Glu Ala Pro  
100 105 110

Gln Tyr Met Asn Tyr Thr Ile Asn Thr Thr Lys Asn Leu Asn Val Ser  
115 120 125

Ile Ser Lys Lys Arg Lys Arg Arg Phe Leu Gly Phe Leu Leu Gly Val  
130 135 140

Gly Ser Ala Ile Ala Ser Gly Ile Ala Val Ser Lys Val Leu His Leu  
145 150 155 160

Glu Gly Glu Val Asn Lys Ile Lys Asn Ala Leu Leu Ser Thr Asn Lys  
165 170 175

Ala Val Val Ser Leu Ser Asn Gly Val Ser Val Leu Thr Ser Lys Val  
180 185 190

Leu Asp Leu Lys Ser Tyr Ile Asn Asn Gln Leu Leu Pro Ile Val Asn  
195 200 205

Gln Gln Ser Cys Arg Ile Ser Asn Ile Glu Thr Val Ile Glu Phe Gln  
210 215 220

Gln Lys Asn Ser Arg Leu Leu Glu Ile Thr Arg Glu Phe Ser Val Asn  
225 230 235 240

Ala Gly Val Thr Thr Pro Leu Ser Thr Tyr Met Leu Thr Asn Ser Glu  
245 250 255

Leu Leu Ser Leu Ile Asn Asp Met Pro Ile Thr Asn Asp Gln Lys Lys  
260 265 270

Leu Met Ser Ser Asn Val Gln Ile Val Arg Gln Gln Ser Tyr Ser Ile  
275 280 285

Met Ser Ile Ile Lys Glu Glu Val Leu Ala Tyr Val Val Gln Leu Pro  
290 295 300

Ile Tyr Gly Val Ile Asp Thr Pro Cys Trp Lys Leu His Thr Ser Pro  
305 310 315 320

Leu Cys Thr Thr Asn Ile Lys Glu Gly Ser Asn Ile Cys Leu Thr Arg  
325 330 335

Thr Asp Arg Gly Trp Tyr Cys Asp Asn Ala Gly Ser Val Ser Phe Phe  
340 345 350

Pro Gln Ala Asp Thr Cys Lys Val Gln Ser Asn Arg Val Phe Cys Asp  
355 360 365

Thr Met Asn Ser Leu Thr Leu Pro Ser Glu Val Ser Leu Cys Asn Thr  
370 375 380

Asp Ile Phe Asn Ser Lys Tyr Asp Cys Lys Ile Met Thr Ser Lys Thr  
385 390 395 400

Asp Ile Ser Ser Ser Val Ile Thr Ser Leu Gly Ala Ile Val Ser Cys  
405 410 415

Tyr Gly Lys Thr Lys Cys Thr Ala Ser Asn Lys Asn Arg Gly Ile Ile  
420 425 430

Lys Thr Phe Ser Asn Gly Cys Asp Tyr Val Ser Asn Lys Gly Val Asp  
435 440 445

Thr Val Ser Val Gly Asn Thr Leu Tyr Tyr Val Asn Lys Leu Glu Gly  
450 455 460

Lys Asn Leu Tyr Val Lys Gly Glu Pro Ile Ile Asn Tyr Tyr Asp Pro  
465 470 475 480

Leu Val Phe Pro Ser Asp Glu Phe Asp Ala Ser Ile Ser Gln Val Asn  
485 490 495

Glu Lys Ile Asn Gln Ser Leu Ala Phe Ile Arg Arg Ser Asp Glu Leu  
500 505 510

Leu His Asn Val Asn Thr Gly Lys Ser Thr Thr Asn Ile Met Ile Thr  
515 520 525

Thr Ile Ile Ile Val Ile Ile Val Val Leu Leu Ser Leu Ile Ala Ile  
530 535 540

Gly Leu Leu Leu Tyr Cys Lys Ala Lys Asn Thr Pro Val Thr Leu Ser  
545 550 555 560

Lys Asp Gln Leu Ser Gly Ile Asn Asn Ile Ala Phe Ser Lys  
565 570

<210> 9  
<211> 195  
<212> PRT  
<213> respiratory syncytial virus B 9320

<400> 9

Met Ser Arg Arg Asn Pro Cys Lys Phe Glu Ile Arg Gly His Cys Leu  
1 5 10 15

Asn Gly Arg Arg Cys His Tyr Ser His Asn Tyr Phe Glu Trp Pro Pro  
20 25 30

His Ala Leu Leu Val Arg Gln Asn Phe Met Leu Asn Lys Ile Leu Lys  
35 40 45

Ser Met Asp Lys Ser Ile Asp Thr Leu Ser Glu Ile Ser Gly Ala Ala  
50 55 60

Glu Leu Asp Arg Thr Glu Glu Tyr Ala Leu Gly Ile Val Gly Val Leu  
65 70 75 80

Glu Ser Tyr Ile Gly Ser Ile Asn Asn Ile Thr Lys Gln Ser Ala Cys  
85 90 95

Val Ala Met Ser Lys Leu Leu Ile Glu Ile Asn Ser Asp Asp Ile Lys  
100 105 110

Lys Leu Arg Asp Asn Glu Glu Pro Asn Ser Pro Lys Ile Arg Val Tyr  
115 120 125

Asn Thr Val Ile Ser Tyr Ile Glu Ser Asn Arg Lys Asn Asn Lys Gln  
130 135 140

Thr Ile His Leu Leu Lys Arg Leu Pro Ala Asp Val Leu Lys Lys Thr  
145 150 155 160

Ile Lys Asn Thr Leu Asp Ile His Lys Ser Ile Thr Ile Ser Asn Pro  
165 170 175

Lys Glu Ser Thr Val Asn Asp Gln Asn Asp Gln Thr Lys Asn Asn Asp  
180 185 190

Ile Thr Gly  
195

<210> 10  
<211> 93  
<212> PRT  
<213> respiratory syncytial virus B 9320

<400> 10

Met Ile Lys Met Thr Lys Pro Lys Ile Met Ile Leu Pro Asp Lys Tyr  
1 5 10 15

Pro Cys Ser Ile Ser Ser Ile Leu Ile Ser Ser Glu Ser Met Val Ala  
20 25 30

Thr Phe Asn His Lys Asn Ile Leu Gln Phe Asn His Asn His Leu Asp  
35 40 45

Asn His Gln Cys Leu Leu Asn His Ile Phe Asp Glu Ile His Trp Thr  
50 55 60

Pro Lys Asn Leu Leu Asp Thr Thr Gln Gln Phe Leu Gln His Leu Asn  
65                   70                   75                   80

Ile Pro Glu Asp Ile Tyr Thr Val Tyr Ile Leu Val Ser  
85                   90

<210> 11  
<211> 2166  
<212> PRT  
<213> respiratory syncytial virus B 9320

<400> 11

Met Asp Pro Ile Ile Asn Gly Asn Ser Ala Asn Val Tyr Leu Thr Asp  
1               5                   10                   15

Ser Tyr Leu Lys Gly Val Ile Ser Phe Ser Glu Cys Asn Ala Leu Gly  
20               25                   30

Ser Tyr Leu Phe Asn Gly Pro Tyr Leu Lys Asn Asp Tyr Thr Asn Leu  
35               40                   45

Ile Ser Arg Gln Ser Pro Leu Leu Glu His Met Asn Leu Lys Lys Leu  
50               55                   60

Thr Ile Thr Gln Ser Leu Ile Ser Arg Tyr His Lys Gly Glu Leu Lys  
65               70                   75                   80

Leu Glu Glu Pro Thr Tyr Phe Gln Ser Leu Leu Met Thr Tyr Lys Ser  
85               90                   95

Met Ser Ser Ser Glu Gln Ile Ala Thr Thr Asn Leu Leu Lys Lys Ile  
100              105                   110

Ile Arg Arg Ala Ile Glu Ile Ser Asp Val Lys Val Tyr Ala Ile Leu  
115              120                   125

Asn Lys Leu Gly Leu Lys Glu Lys Asp Arg Val Lys Pro Asn Asn Asn  
130              135                   140

Ser Gly Asp Glu Asn Ser Val Leu Thr Thr Ile Ile Lys Asp Asp Ile  
145              150                   155                   160

Leu Ser Ala Val Glu Asn Asn Gln Ser Tyr Thr Asn Ser Asp Lys Asn  
165              170                   175

His Ser Val Asn Gln Asn Ile Thr Ile Lys Thr Thr Leu Leu Lys Lys  
180 185 190

Leu Met Cys Ser Met Gln His Pro Pro Ser Trp Leu Ile His Trp Phe  
195 200 205

Asn Leu Tyr Thr Lys Leu Asn Asn Ile Leu Thr Gln Tyr Arg Ser Asn  
210 215 220

Glu Val Lys Ser His Gly Phe Ile Leu Ile Asp Asn Gln Thr Leu Ser  
225 230 235 240

Gly Phe Gln Phe Ile Leu Asn Gln Tyr Gly Cys Ile Val Tyr His Lys  
245 250 255

Gly Leu Lys Lys Ile Thr Thr Thr Tyr Asn Gln Phe Leu Thr Trp  
260 265 270

Lys Asp Ile Ser Leu Ser Arg Leu Asn Val Cys Leu Ile Thr Trp Ile  
275 280 285

Ser Asn Cys Leu Asn Thr Leu Asn Lys Ser Leu Gly Leu Arg Cys Gly  
290 295 300

Phe Asn Asn Val Val Leu Ser Gln Leu Phe Leu Tyr Gly Asp Cys Ile  
305 310 315 320

Leu Lys Leu Phe His Asn Glu Gly Phe Tyr Ile Ile Lys Glu Val Glu  
325 330 335

Gly Phe Ile Met Ser Leu Ile Leu Asn Ile Thr Glu Glu Asp Gln Phe  
340 345 350

Arg Thr Arg Phe Tyr Asn Ser Met Leu Asn Asn Ile Thr Asp Ala Ala  
355 360 365

Ile Lys Ala Gln Lys Asn Leu Leu Ser Arg Val Cys His Thr Leu Leu  
370 375 380

Asp Lys Thr Val Ser Asp Asn Ile Ile Asn Gly Lys Trp Ile Ile Leu  
385 390 395 400

Leu Ser Lys Phe Leu Lys Leu Ile Lys Leu Ala Gly Asp Asn Asn Leu  
405 410 415

Asn Asn Leu Ser Glu Leu Tyr Phe Leu Phe Arg Ile Phe Gly His Pro  
420 425 430

Met Val Asp Glu Arg Gln Ala Met Asp Ala Val Arg Ile Asn Cys Asn  
435 440 445

Glu Thr Lys Phe Tyr Leu Leu Ser Ser Leu Ser Thr Leu Arg Gly Ala  
450 455 460

Phe Ile Tyr Arg Ile Ile Lys Gly Phe Val Asn Thr Tyr Asn Arg Trp  
465 470 475 480

Pro Thr Leu Arg Asn Ala Ile Val Leu Pro Leu Arg Trp Leu Asn Tyr  
485 490 495

Tyr Lys Leu Asn Thr Tyr Pro Ser Leu Leu Glu Ile Thr Glu Asn Asp  
500 505 510

Leu Ile Ile Leu Ser Gly Leu Arg Phe Tyr Arg Glu Phe His Leu Pro  
515 520 525

Lys Lys Val Asp Leu Glu Met Ile Ile Asn Asp Lys Ala Ile Ser Pro  
530 535 540

Pro Lys Asp Leu Ile Trp Thr Ser Phe Pro Arg Asn Tyr Met Pro Ser  
545 550 555 560

His Ile Gln Asn Tyr Ile Glu His Glu Lys Leu Lys Phe Ser Glu Ser  
565 570 575

Asp Arg Ser Arg Arg Val Leu Glu Tyr Tyr Leu Arg Asp Asn Lys Phe  
580 585 590

Asn Glu Cys Asp Leu Tyr Asn Cys Val Val Asn Gln Ser Tyr Leu Asn  
595 600 605

Asn Ser Asn His Val Val Ser Leu Thr Gly Lys Glu Arg Glu Leu Ser  
610 615 620

Val Gly Arg Met Phe Ala Met Gln Pro Gly Met Phe Arg Gln Ile Gln  
625 630 635 640

Ile Leu Ala Glu Lys Met Ile Ala Glu Asn Ile Leu Gln Phe Phe Pro

645

650

655

Glu Ser Leu Thr Arg Tyr Gly Asp Leu Glu Leu Gln Lys Ile Leu Glu  
660 665 670

Leu Lys Ala Gly Ile Ser Asn Lys Ser Asn Arg Tyr Asn Asp Asn Tyr  
675 680 685

Asn Asn Tyr Ile Ser Lys Cys Ser Ile Ile Thr Asp Leu Ser Lys Phe  
690 695 700

Asn Gln Ala Phe Arg Tyr Glu Thr Ser Cys Ile Cys Ser Asp Val Leu  
705 710 715 720

Asp Glu Leu His Gly Val Gln Ser Leu Phe Ser Trp Leu His Leu Thr  
725 730 735

Ile Pro Leu Val Thr Ile Ile Cys Thr Tyr Arg His Ala Pro Pro Phe  
740 745 750

Ile Lys Asp His Val Val Asn Leu Asn Glu Val Asp Glu Gln Ser Gly  
755 760 765

Leu Tyr Arg Tyr His Met Gly Gly Ile Glu Gly Trp Cys Gln Lys Leu  
770 775 780

Trp Thr Ile Glu Ala Ile Ser Leu Leu Asp Leu Ile Ser Leu Lys Gly  
785 790 795 800

Lys Phe Ser Ile Thr Ala Leu Ile Asn Gly Asp Asn Gln Ser Ile Asp  
805 810 815

Ile Ser Lys Pro Val Arg Leu Ile Glu Gly Gln Thr His Ala Gln Ala  
820 825 830

Asp Tyr Leu Leu Ala Leu Asn Ser Leu Lys Leu Leu Tyr Lys Glu Tyr  
835 840 845

Ala Gly Ile Gly His Lys Leu Lys Gly Thr Glu Thr Tyr Ile Ser Arg  
850 855 860

Asp Met Gln Phe Met Ser Lys Thr Ile Gln His Asn Gly Val Tyr Tyr  
865 870 875 880

Pro Ala Ser Ile Lys Lys Val Leu Arg Val Gly Pro Trp Ile Asn Thr  
885 890 895

Ile Leu Asp Asp Phe Lys Val Ser Leu Glu Ser Ile Gly Ser Leu Thr  
900 905 910

Gln Glu Leu Glu Tyr Arg Gly Glu Ser Leu Leu Cys Ser Leu Ile Phe  
915 920 925

Arg Asn Ile Trp Leu Tyr Asn Gln Ile Ala Leu Gln Leu Arg Asn His  
930 935 940

Ala Leu Cys His Asn Lys Leu Tyr Leu Asp Ile Leu Lys Val Leu Lys  
945 950 955 960

His Leu Lys Thr Phe Phe Asn Leu Asp Ser Ile Asp Met Ala Leu Ser  
965 970 975

Leu Tyr Met Asn Leu Pro Met Leu Phe Gly Gly Asp Pro Asn Leu  
980 985 990

Leu Tyr Arg Ser Phe Tyr Arg Arg Thr Pro Asp Phe Leu Thr Glu Ala  
995 1000 1005

Ile Val His Ser Val Phe Val Leu Ser Tyr Tyr Thr Gly His Asp  
1010 1015 1020

Leu Gln Asp Lys Leu Gln Asp Leu Pro Asp Asp Arg Leu Asn Lys  
1025 1030 1035

Phe Leu Thr Cys Ile Ile Thr Phe Asp Lys Asn Pro Asn Ala Glu  
1040 1045 1050

Phe Val Thr Leu Met Arg Asp Pro Gln Ala Leu Gly Ser Glu Arg  
1055 1060 1065

Gln Ala Lys Ile Thr Ser Glu Ile Asn Arg Leu Ala Val Thr Glu  
1070 1075 1080

Val Leu Ser Ile Ala Pro Asn Lys Ile Phe Ser Lys Ser Ala Gln  
1085 1090 1095

His Tyr Thr Thr Thr Glu Ile Asp Leu Asn Asp Ile Met Gln Asn  
1100 1105 1110

Ile Glu Pro Thr Tyr Pro His Gly Leu Arg Val Val Tyr Glu Ser  
1115 1120 1125

Leu Pro Phe Tyr Lys Ala Glu Lys Ile Val Asn Leu Ile Ser Gly  
1130 1135 1140

Thr Lys Ser Ile Thr Asn Ile Leu Glu Lys Thr Ser Ala Ile Asp  
1145 1150 1155

Thr Thr Asp Ile Asn Arg Ala Thr Asp Met Met Arg Lys Asn Ile  
1160 1165 1170

Thr Leu Leu Ile Arg Ile Leu Pro Leu Asp Cys Asn Lys Asp Lys  
1175 1180 1185

Arg Glu Leu Leu Ser Leu Glu Asn Leu Ser Ile Thr Glu Leu Ser  
1190 1195 1200

Lys Tyr Val Arg Glu Arg Ser Trp Ser Leu Ser Asn Ile Val Gly  
1205 1210 1215

Val Thr Ser Pro Ser Ile Met Phe Thr Met Asp Ile Lys Tyr Thr  
1220 1225 1230

Thr Ser Thr Ile Ala Ser Gly Ile Ile Ile Glu Lys Tyr Asn Val  
1235 1240 1245

Asn Ser Leu Thr Arg Gly Glu Arg Gly Pro Thr Lys Pro Trp Val  
1250 1255 1260

Gly Ser Ser Thr Gln Glu Lys Lys Thr Met Pro Val Tyr Asn Arg  
1265 1270 1275

Gln Val Leu Thr Lys Lys Gln Arg Asp Gln Ile Asp Leu Leu Ala  
1280 1285 1290

Lys Leu Asp Trp Val Tyr Ala Ser Ile Asp Asn Lys Asp Glu Phe  
1295 1300 1305

Met Glu Glu Leu Ser Thr Gly Thr Leu Gly Leu Ser Tyr Glu Lys  
1310 1315 1320

Ala Lys Lys Leu Phe Pro Gln Tyr Leu Ser Val Asn Tyr Leu His  
1325 1330 1335

Arg Leu Thr Val Ser Ser Arg Pro Cys Glu Phe Pro Ala Ser Ile  
1340 1345 1350

Pro Ala Tyr Arg Thr Thr Asn Tyr His Phe Asp Thr Ser Pro Ile  
1355 1360 1365

Asn His Val Leu Thr Glu Lys Tyr Gly Asp Glu Asp Ile Asp Ile  
1370 1375 1380

Val Phe Gln Asn Cys Ile Ser Phe Gly Leu Ser Leu Met Ser Val  
1385 1390 1395

Val Glu Gln Phe Thr Asn Ile Cys Pro Asn Arg Ile Ile Leu Ile  
1400 1405 1410

Pro Lys Leu Asn Glu Ile His Leu Met Lys Pro Pro Ile Phe Thr  
1415 1420 1425

Gly Asp Val Asp Ile Ile Lys Leu Lys Gln Val Ile Gln Lys Gln  
1430 1435 1440

His Met Phe Leu Pro Asp Lys Ile Ser Leu Thr Gln Tyr Val Glu  
1445 1450 1455

Leu Phe Leu Ser Asn Lys Ala Leu Lys Ser Gly Ser His Ile Asn  
1460 1465 1470

Ser Asn Leu Ile Leu Val His Lys Met Ser Asp Tyr Phe His Asn  
1475 1480 1485

Asp Tyr Ile Leu Ser Thr Asn Leu Ala Gly His Trp Ile Leu Ile  
1490 1495 1500

Ile Gln Leu Met Lys Asp Ser Lys Gly Ile Phe Glu Lys Asp Trp  
1505 1510 1515

Gly Glu Gly Tyr Ile Thr Asp His Met Phe Ile Asn Leu Asn Val  
1520 1525 1530

Phe Phe Asn Ala Tyr Lys Thr Tyr Leu Leu Cys Phe His Lys Gly  
1535 1540 1545

Tyr Gly Lys Ala Lys Leu Glu Cys Asp Met Asn Thr Ser Asp Leu

1550

1555

1560

Leu Cys Val Leu Glu Leu Ile Asp Ser Ser Tyr Trp Lys Ser Met  
 1565 1570 1575

Ser Lys Val Phe Leu Glu Gln Lys Val Ile Lys Tyr Ile Val Asn  
 1580 1585 1590

Gln Asp Thr Ser Leu His Arg Ile Lys Gly Cys His Ser Phe Lys  
 1595 1600 1605

Leu Trp Phe Leu Lys Arg Leu Asn Asn Ala Lys Phe Thr Val Cys  
 1610 1615 1620

Pro Trp Val Val Asn Ile Asp Tyr His Pro Thr His Met Lys Ala  
 1625 1630 1635

Ile Leu Ser Tyr Ile Asp Leu Val Arg Met Gly Leu Ile Asn Val  
 1640 1645 1650

Asp Lys Leu Thr Ile Lys Asn Lys Asn Lys Phe Asn Asp Glu Phe  
 1655 1660 1665

Tyr Thr Ser Asn Leu Phe Tyr Ile Ser Tyr Asn Phe Ser Asp Asn  
 1670 1675 1680

Thr His Leu Leu Thr Lys Gln Ile Arg Ile Ala Asn Ser Glu Leu  
 1685 1690 1695

Glu Asn Asn Tyr Asn Lys Leu Tyr His Pro Thr Pro Glu Thr Leu  
 1700 1705 1710

Glu Asn Met Ser Leu Ile Pro Val Lys Ser Asn Asn Ser Asn Lys  
 1715 1720 1725

Pro Lys Ser Cys Ile Ser Gly Asn Thr Glu Ser Met Met Thr Ser  
 1730 1735 1740

Thr Phe Ser Asn Lys Met His Ile Lys Ser Ser Thr Val Thr Thr  
 1745 1750 1755

Arg Leu Asn Tyr Ser Lys Gln Asp Leu Tyr Asn Leu Phe Pro Ile  
 1760 1765 1770

Val Val Ile Asp Arg Ile Ile Asp His Ser Gly Asn Thr Ala Lys  
1775 1780 1785

Ser Asn Gln Leu Tyr Thr Thr Ser His Gln Thr Ser Leu Val  
1790 1795 1800

Arg Asn Ser Ala Ser Leu Tyr Cys Met Leu Pro Trp His His Val  
1805 1810 1815

Asn Arg Phe Asn Phe Val Phe Ser Ser Thr Gly Cys Lys Ile Ser  
1820 1825 1830

Ile Glu Tyr Ile Leu Lys Asp Leu Lys Ile Lys Asp Pro Ser Cys  
1835 1840 1845

Ile Ala Phe Ile Gly Glu Gly Ala Gly Asn Leu Leu Leu Arg Thr  
1850 1855 1860

Val Val Glu Leu His Pro Asp Ile Arg Tyr Ile Tyr Arg Ser Leu  
1865 1870 1875

Lys Asp Cys Asn Asp His Ser Leu Pro Ile Glu Phe Leu Arg Leu  
1880 1885 1890

Tyr Asn Gly His Ile Asn Ile Asp Tyr Gly Glu Asn Leu Thr Ile  
1895 1900 1905

Pro Ala Thr Asp Ala Thr Asn Asn Ile His Trp Ser Tyr Leu His  
1910 1915 1920

Ile Lys Phe Ala Glu Pro Ile Ser Ile Phe Val Cys Asp Ala Glu  
1925 1930 1935

Leu Pro Val Thr Ala Asn Trp Ser Lys Ile Ile Ile Glu Trp Ser  
1940 1945 1950

Lys His Val Arg Lys Cys Lys Tyr Cys Ser Ser Val Asn Arg Cys  
1955 1960 1965

Ile Leu Ile Ala Lys Tyr His Ala Gln Asp Asp Ile Asp Phe Lys  
1970 1975 1980

Leu Asp Asn Ile Thr Ile Leu Lys Thr Tyr Val Cys Leu Gly Ser  
1985 1990 1995

Lys Leu Lys Gly Ser Glu Val Tyr Leu Val Leu Thr Ile Gly Pro  
2000 2005 2010

Ser Asn Ile Leu Pro Val Phe Asn Val Val Gln Asn Ala Lys Leu  
2015 2020 2025

Ile Leu Ser Arg Thr Lys Asn Phe Ile Met Pro Lys Lys Thr Asp  
2030 2035 2040

Lys Glu Ser Ile Asp Ala Asn Ile Lys Ser Leu Ile Pro Phe Leu  
2045 2050 2055

Cys Tyr Pro Ile Thr Lys Lys Gly Ile Lys Thr Ser Leu Ser Lys  
2060 2065 2070

Leu Lys Ser Val Val Asn Gly Asp Ile Leu Ser Tyr Ser Ile Ala  
2075 2080 2085

Gly Arg Asn Glu Val Phe Ser Asn Lys Leu Ile Asn His Lys His  
2090 2095 2100

Met Asn Ile Leu Lys Trp Leu Asp His Val Leu Asn Phe Arg Ser  
2105 2110 2115

Thr Glu Leu Asn Tyr Asn His Leu Tyr Met Ile Glu Ser Thr Tyr  
2120 2125 2130

Pro Tyr Leu Ser Glu Leu Leu Asn Ser Leu Thr Thr Asn Glu Leu  
2135 2140 2145

Lys Lys Leu Ile Lys Ile Thr Gly Ser Val Leu Tyr Asn Leu Pro  
2150 2155 2160

Asn Glu Gln  
2165

<210> 12  
<211> 292  
<212> PRT  
<213> respiratory syncytial virus B 9320

<400> 12

Met Ser Lys His Lys Ser Gln Arg Thr Ala Arg Thr Leu Glu Lys Thr  
1 5 10 15

Trp Asp Thr Leu Asn His Leu Ile Val Ile Ser Ser Cys Leu Tyr Arg  
20 25 30

Leu Asn Leu Lys Ser Ile Ala Gln Ile Ala Leu Ser Val Leu Ala Met  
35 40 45

Ile Ile Ser Thr Ser Leu Ile Ile Ala Ala Ile Ile Phe Ile Ile Ser  
50 55 60

Ala Asn His Lys Val Thr Leu Thr Thr Val Thr Val Gln Thr Ile Lys  
65 70 75 80

Asn His Thr Glu Lys Asn Ile Thr Thr Tyr Leu Thr Gln Val Ser Pro  
85 90 95

Glu Arg Val Ser Ser Ser Ile Gln Pro Thr Thr Thr Ser Pro Ile His  
100 105 110

Thr Asn Ser Ala Thr Ile Ser Pro Asn Thr Lys Ser Glu Thr His His  
115 120 125

Thr Thr Thr Gln Ala Lys Ser Arg Ile Thr Thr Ser Thr Gln Thr Asn  
130 135 140

Lys Pro Ser Thr Lys Ser Arg Ser Lys Asn Pro Pro Lys Lys Pro Lys  
145 150 155 160

Asp Asp Tyr His Phe Glu Val Phe Asn Phe Val Pro Cys Ser Ile Cys  
165 170 175

Gly Asn Asn Gln Leu Cys Lys Ser Ile Cys Lys Thr Ile Pro Ser Asn  
180 185 190

Lys Pro Lys Lys Pro Thr Ile Lys Pro Thr Asn Lys Pro Thr Val  
195 200 205

Lys Thr Thr Asn Lys Arg Asp Pro Lys Thr Pro Ala Lys Met Met Lys  
210 215 220

Lys Glu Thr Thr Asn Pro Thr Lys Lys Pro Thr Leu Lys Thr Thr  
225 230 235 240

Glu Gly Asp Thr Ser Thr Ser Gln Ser Thr Val Leu Asp Thr Thr Thr  
245 250 255

Ser Lys His Thr Ile Gln Gln Gln Ser Leu His Ser Ile Thr Ser Glu  
260 265 270

Asn Thr Pro Asn Ser Thr Gln Ile Pro Thr Ala Thr Glu Ala Ser Thr  
275 280 285

Ser Asn Ser Thr  
290

<210> 13  
<211> 15225  
<212> DNA  
<213> respiratory syncytial virus B 1

<400> 13  
acgcgaaaaa atgcgtacta caaacttgca cattcgaaaa aaatggggca aataagaatt 60  
tgataagtgc tatttaagtc taaccctttc aatcagaaat ggggtgcaat tcactgagca 120  
tgataaaggtagattacaa aatttatttg acaatgacga agtagcattt ttaaaaataa 180  
catgttatac tgacaaattt attcttctga ccaatgcatt agccaaagca gcaatacata 240  
caattaaatt aaacggtata gttttatac atgttataac aagcagtgaa gtgtgccctg 300  
ataacaacat ttagttaaaa tctaacttta caacaatgcc aatattacaa aacggaggat 360  
acatatggaa attgatttag ttgacacact gctctcaatt aaacggtcta atggatgata 420  
attgtgaaat caaattttct aaaagactaa gtgactcagt aatgactaat tatatgaatc 480  
aaatatctga ttacttggg cttgatctca attcatgaat tatgttttagt ctaactcaat 540  
agacatgtgt ttattaccat ttagttaat ataaaaactc atcaaaggaa aatggggcaa 600  
ataaaactcac ctaatcaatc aaactatgag cactacaaat gacaacacta ctatgcaaag 660  
attaatgatc acggacatga gaccctgtc gatggattca ataataacat ctctcaccaa 720  
agaaatcatc acacacaaat tcataactt gataaacaat gaatgtattt taagaaaact 780  
ttagttaaaa caagctacat ttacattttt agtcaattt gagatgaagc tactgcacaa 840  
agtagggagt accaaataca agaaatacac tgaatataat aaaaaatatg gcactttccc 900  
catgcctata ttatcaatc atggcgggtt tctagaatgt attggcatta agcctacaaa 960  
acacactcct ataataataca aatatgacct caacccgtaa attccaacaa aaaaaaccaa 1020  
cccaacccaa ccaagctatt cctcaaacaa caatgctcaa tagttaagaa ggagctaatc 1080  
cgtttttagta attaaaaata aaagtaaagc caataacata aattggggca aatacaaaga 1140  
tggctcttag caaagtcaag ttaaatgata cattaaataa ggatcagctg ctgtcatcca 1200

gcaaatacac tattcaacgt agtacaggag ataatatga cactccaat tatgatgtgc	1260
aaaaacacct aaacaaacta tgtggtatgc tattaatcac tgaagatgca aatcataaat	1320
tcacaggatt aataggtagt ttatatgcta tgtccagggtt aggaaggaa gacactataa	1380
agatacttaa agatgctgga tatcatgtta aagctaattgg agtagatata acaacatatac	1440
gtcaagatataatggaaag gaaatgaaat tcgaagtatt aacattatca agcttgacat	1500
cagaaataca agtcaatatt gagatagaat cttagaaaatc ctacaaaaaa atgctaaaag	1560
agatggaga agtggctcca gaatataggc atgattctcc agactgtggg atgataatac	1620
tgtgtatagc agcacttgta ataaccaaatt tagcagcagg agacagatca ggtcttacag	1680
cagtaattag gagggcaaac aatgtcttaa aaaatgaaat aaaacgctac aagggtctca	1740
taccaaagga tatacgtaac agttttatg aagtgtttga aaaacaccct catcttata	1800
atgttttgt gcactttggc attgcacaat catcaacaag agggggtagt agagttgaag	1860
gaatcttgc aggattgtt atgaatgcct atggttcagg gcaagtaatg ctaagatggg	1920
gagttttgc caaatctgta aaaaatatca tgcttagtca tgcttagtgc caggcagaaa	1980
tggagcaagt tgtggaagtc tatgagtatg cacagaagtt gggaggagaa gctggattct	2040
accatataatt gaacaatcca aaagcatcat tgctgtcatt aactcaattt cctaacttct	2100
caagtgtggt cctaggcaat gcagcaggc taggcataat gggagagtat agaggtacgc	2160
caagaaacca ggatctttat gatgcagcca aagcatatgc agagcaactc aaagaaaaatg	2220
gagtaataaa ctacagtgtta ttagacttaa cagcagaaga attggaagcc ataaagaatc	2280
aactcaaccc taaaagagat gatgttagagc tttaaatgtaa caaaaaatac ggggcaaata	2340
agtcaacatg gagaagtttgc cacctgaatt tcatggagaa gatgcaaata acaaagctac	2400
caaattccta gaatcaataa agggcaagtt cgcatcatcc aaagatccta agaagaaaaga	2460
tagcataata tctgttaact caatagatata agaagtaacc aaagagagcc cgataacatc	2520
tggcaccaac atcatcaatc caacaagtga agccgacagt accccagaaa ccaaagccaa	2580
ctacccaaga aaacccctag taagcttcaa agaagatctc accccaagtg acaaccctt	2640
ttcttaagttg tacaaaagaaa caatagaaac atttgataac aatgaagaag aatctagcta	2700
ctcatatgaa gagataatg atcaaacaaa tgacaacatt acagcaagac tagatagaat	2760
tgatgaaaaa ttaagtgaaa tattaggaat gctccataca ttagtagttt caagtgcagg	2820
acccacttca gctcgcgatg gaataagaga tgctatggtt ggtctgagag aagaaatgat	2880
agaaaaaaaata agagcggaaag cattaatgac caatgatagg ttagaggcta tggcaagact	2940

taggaatgag	gaaagcgaaa	aatggcaaa	agacaccta	gatgaagtgc	ctcttaatcc	3000
aacttccaaa	aaattgagtg	acttgttga	agacaacgt	agtacaatg	atctgtcact	3060
tgtatgttt	tgatcagtga	tcaactcact	cagcaatcaa	caacatcaat	aaaacagaca	3120
tcaatccatt	gaatcaactg	ccagaccgaa	caaacaatg	tccgtcagcg	gaaccaccaa	3180
ccaatcaatc	aaccaactga	tccatcagca	acctgacgaa	attaacaata	tagtaacaaa	3240
aaaagaacaa	gatggggcaa	atatggaaac	atacgtgaac	aagcttcacg	aaggctccac	3300
atacacagca	gctgttcagt	acaatgttct	agaaaaagat	gatgatcctg	catcactaac	3360
aatatgggt	cctatgttcc	agtcatctgt	accagcagac	ttgctcataa	aagaacttgc	3420
aagcatcaac	atactagtga	agcagatctc	tacgccccaa	ggaccttcac	tacgagtcac	3480
gattaactca	agaagtgctg	tgctggctca	aatgcctagt	aatttcatca	taagcgcaaa	3540
tgtatcatta	gatgaaagaa	gcaaattagc	atatgatgt	actacacett	gtgaaatcaa	3600
agcatcgagt	ctaacatgct	taaaagtgaa	aagtatgtt	actacagtca	aagatcttac	3660
catgaagaca	ttcaacccca	ctcatgagat	cattgctcta	tgtgaatttg	aaaatattat	3720
gacatcaaaa	agagtaataa	taccaaccta	tctaagacca	attagtgtca	aaaacaagga	3780
tctgaactca	ctagaaaaca	tagcaaccac	cgaattcaaa	aatgctatca	ccaatgcgaa	3840
aattattccc	tatgctggat	tagtattagt	tatcacagtt	actgacaata	aaggagcatt	3900
caaatatatc	aagccacaga	gtcaatttat	agtagatctt	ggtgcctacc	tagaaaaaga	3960
gagcatatat	tatgtgacta	ctaattggaa	gcatacagct	acacgtttt	caatcaaacc	4020
actagaggat	taaatttaat	tatcaacact	gaatgacagg	tccacatata	tcctcaaact	4080
acacactata	tccaaacatc	atgaacatct	acactacaca	cttcatcaca	caaaccaatc	4140
ccactcaaaa	tccaaaatca	ctaccagcca	ctatctgcta	gacctagagt	gcgaataggt	4200
aaataaaacc	aaaatatggg	gtaaatagac	attagttaga	gttcaatcaa	tctcaacaac	4260
catttatacc	gcccaattcaa	tacatatact	ataaatctt	aaatgggaaa	tacatccatc	4320
acaatagaat	tcacaagcaa	attttggccc	tatTTacac	taatacatat	gatcttaact	4380
ctaattcttt	tactaattat	aatcactatt	atgattgcaa	tactaaataa	gctaagtgaa	4440
cataaaaacat	tctgtaccaa	tactcttgaa	ctaggacaga	tgcataat	caacacatag	4500
tgctctacca	tcatgctgtg	tcaaattata	atcctgtata	tataaacaaa	caaatccat	4560
cttctcacag	agtcatggtg	tcgcaaaacc	acgccaacta	tcatggtagc	atagagtagt	4620
tatTTaaaaa	ttaacataat	gatgaattat	tagtatggg	tcaaaaacaa	cattggggca	4680
aatgcaacca	tgtccaaaca	caagaatcaa	cgcactgcc	ggactctaga	aaagacctgg	4740

gatactctca atcatcta atgtatcc tcttggat acagattaaa tttaaatct	4800
atagcacaaa tagcactatc agttctggca atgataatct caacctctc cataattgca	4860
gccataatat tcatacatctc tgccaatcac aaagttacac taacaacggt cacagttcaa	4920
acaataaaaa accacactga aaaaaacatc accacctacc ttactcaagt cccaccagaa	4980
agggttagct catccaaaca acctacaacc acatcacca tccacacaaa ttccagccaca	5040
acatcaccca acacaaagtc agaaacacac cacacaacag cacaacccaa aggccagaacc	5100
accacctcaa cacagaccaa caagccgagc acaaaaccac gcctaaaaaaaa tccaccaaaa	5160
aaacccaaag atgattacca ttttgaagtg ttcaacttcg ttccctgttag tatatgtggc	5220
aacaatcaac ttgc当地atc catctgtaaa acaataccaa gcaacaaacc aaagaagaaa	5280
ccaaccatca aacccacaaa caaaccacc accaaaacca caaacaaaag agacccaaaa	5340
acaccagcca aaacgacgaa aaaagaaact accaccaacc caacaaaaaaaa accaaccctc	5400
acgaccacag aaagagacac cagcacctca caatccactg tgctcgacac aaccacatta	5460
gaacacacaa tccaacagca atccctccac tcaaccaccc ccgaaaacac acccaactcc	5520
acacaaacac ccacagcatc cgagccctc acatcaaatt ccacccaaaa tacccatca	5580
catgcttagt tattcaaaaa ctacatcttgc gctgctgatc cacagttaa gtgcaatctt	5640
gaaattaaac ctggggcaaa taaccatgga gctgctgatc cacagttaa gtgcaatctt	5700
cctaactctt gcttataatg cattgtaccc cacctcaagt cagaacataa ctgaggagtt	5760
ttaccaatcg acatgttagtg cagttaccc aggttatttt agtgc当地ttaa gaacaggttg	5820
gtataccatg gtc当地acaa tagaattaag taatataaaa gaaacccaaat gcaatggaac	5880
tgacactaaa gtaaaaactta taaaacaaga attagataag tataagaatg cagtgacaga	5940
attacagcta ctatgcaaa acacaccaggc tgccaaacac cgggcccagaa gagaagcacc	6000
acagtatatg aactatacaa tcaataccac taaaacccaa aatgtatcaa taagcaagaa	6060
gaggaaacga agatttctgg gcttcttgc aggtgttagga tctgcaatag caagtggtat	6120
agctgtatcc aaagttctac accttgcagg agaagtgaac aagatccaaa atgc当地tttgc	6180
atctacaaac aaagctgttag tcagtc当地tcc acatgggtc agtgc当地ttaa ccagccaaatg	6240
gttagatctc aagaattaca taaataacca attattaccc atagtaaaatc aacagagctg	6300
tcgc当地tcc aacattgaaa cagttataga attccagcag aagaacagca gattgttgaa	6360
aatcaacaga gaattcagtg tcaatgcagg tgtaacaaca ctttaagca cttacatgtt	6420
aacaaacagt gagttactat cattgatcaa tgatatgcct ataacaaatg atcagaaaaaa	6480

attaatgtca agcaatgttc agatagtaag gcaacaaagt tattctatca tgtctataat	6540
aaaggaagaa gtccttgc atgttgtaca gctacctatc tatgggtgaa tagatacacc	6600
ttgctggaaa ttacacacat cacctctatg caccaccaac atcaaagaag gatcaaatat	6660
ttgtttaaca aggactgata gaggatggtt ttgtgataat gcaggatcag tattccttctt	6720
tccacaggct gacacttgta aagtacagtc caatcgagta ttttgtgaca ctatgaacag	6780
tttgacatta ccaagtgaag tcagccttgc taacactgac atattcaatt ccaagtatga	6840
ctgcaaaatt atgacatcaa aaacagacat aagcagctca gtaattactt ctcttggagc	6900
tatagtgtca tgctatggta aaactaaatg cactgcatcc aacaaaaatc gtgggattat	6960
aaagacattt tctaattgggtt gtgactatgt gtcaaacaaa ggagtagata ctgtgtcagt	7020
gggcaacact ttatactatg taaacaagct ggaaggcaag aacccttatg taaaagggga	7080
acctataata aattactatg accctctagt gtttccttct gatgagtttgc atgcataat	7140
atctcaagtc aatgaaaaaaaaa tcaatcaaag tttagctttt attcgttagat ctgtatgaatt	7200
actacataat gtaaaatactg gcaaatctac tacaaatatt atgataacta caattattat	7260
agtaatcatt gtagtattgt tattcattaat agctattgggt ttgctgttgc attgcaaagc	7320
caaaaaacaca ccagttcacac taagcaaaga ccaactaagt ggaatcaata atattgcatt	7380
cagcaaatacg aaaaaaaaaacc acctgatcat gtttcaacaa cagtcgtcg atcaccatc	7440
ccaaatcaac ccataacaaa cacttcaaca tcacagtaca ggctgaatca tttcttcaca	7500
tcatgctacc cacacaacta agctagatcc ttaactcata gttacataaa aacctcaagt	7560
atcacaatca aacactaaat caacacatca ttcacaaaat taacagctgg ggcaaataatg	7620
tcgcgaagaa atccttgcata atttgagatt agaggtcatt gctgaatgg tagaagatgt	7680
cactacagtc ataattactt tgaatggcct cctcatgcct tactagttag gcaaaacttc	7740
atgttaaaca agataactcaa gtcaatggac aaaagcatag acactttgtc tggaaataagt	7800
ggagctgctg aactggacag aacagaagaa tatgcttttgc gtatagttgg agtgcttagag	7860
agttacatag gatctataaa caacataaca aaacaatcag catgtgttgc tatgagtaaa	7920
cttcttattt agatcaatag ttagtgcatt aaaaagctga gagataatga agaaccataat	7980
tcacctaaga taagagtgtt caatactgtt atatcataca ttgagagcaa tagaaaaaac	8040
aacaagcaaa caatccatct gctcaaaaaga ctaccagcag acgtgctgaa gaagacaata	8100
aaaaacacat tagatatacca caaaagcata atcataagca accaaaaaga gtcaaccgtg	8160
aatgatcaaa atgacccaaac caaaaataat gatattaccg gataaaatatc cttgttagtat	8220
atcatccata ttgatttcaa gtgaaagcat gattgctaca ttcaatcata aaaacatattt	8280

acaatttaac cataaccatt tggataacca ccagcgtta ttaaataata tatttcatga	8340
aattcattgg acacctaaaa acttattaga tgccactcaa caatttctcc aacatctaa	8400
catccctgaa gatatatata caatatatat attagtgtca taatgcttgg ccataacgt	8460
tctatatcat ccaaccataa aactatctta ataaggttat gggacaaaat ggatcccatt	8520
attaatggaa actctgctaa tgtgtatcta actgatagtt attaaaagg tgttatctct	8580
ttttcagaat gtaatgcttt agggagttac cttttaacg gcccttatct caaaaatgat	8640
tacaccaact taatttagtag acaaagtcca ctactagac atatgaatct taaaaaacta	8700
actataaacac agtcattaaat atctagatata cataaaaggtg aactgaaatt agaagaacca	8760
acttatttcc agtcattact tatgacatataaaagcatgt cctcgtctga acaaattgct	8820
acaactaact tactaaaaaa aataatacga agagctatag aaataagtga tgtaaaggtg	8880
tacgccatct tgaataaaact aggactaaag gaaaaggaca gagttaagcc caacaataat	8940
tcaggtgatg aaaactcagt acttacaact ataattaaag atgatatact ttccggctgtg	9000
gaaagcaatc aatcatatac aaattcagac aaaaatcact cagtaaatca aaatatcact	9060
atcaaaaacaa cactcttcaa aaaattgatg tgtaatgc aacatcctcc atcatggta	9120
atacactgg tcaatttata tacaaaatta aataacatata taacacaata tcgatcaaata	9180
gaggtaaaaa gtcatgggtt tatattaata gataatcaa cttaagtgg ttccagttt	9240
attttaatc aatatggttt tatcgtttata cataaaggac tcaaaaaaaaaat cacaactact	9300
acttacaatc aatttttaac atggaaagac atcagcctta gcagattaaa tgttgctta	9360
attacttggta taagtaattt tttgaataca ttaaataaaaa gcttagggct gagatgtgga	9420
ttcaataatg ttgtgttatac acaatttattt cttaatggag attgtatact gaaatttattt	9480
cataatgaag gcttctacat aataaaagaa gtagagggat ttattatgtc tttaattcta	9540
aacataacag aagaagatca atttaggaaa cgattttata atagcatgct aaataacatc	9600
acagatgcag ctatcaggc tcaaaaagaac ctactatcaa gggatgtca cactttattt	9660
gacaagacag tgtctgataa tatcataat ggttaatgga taatcctatt aagtaaattt	9720
cttaaatttga ttaagcttgc aggtgataat aatctcaata atttgagtga gctatattt	9780
ctcttcagaa tctttggaca tccaaatggtt gatggaaagac aagcaatgga tgctgtttaaga	9840
attnactgta atgaaaactaa gttctactta ttaagtagtc taagtacgtt aagaggtgct	9900
ttcatttata gaatcataaa agggtttgtt aatacctaca acagatggcc cactttaagg	9960
aatgctatttgc tcctacatct aagatgggtt aactattata aacttaatac ttatccatct	10020

ctacttgaaa tcacagaaaa tgatttgatt attttatcg gattgcgggtt ctatcgtaa 10080  
tttcatctgc ctaaaaaagt ggatcttcaa atgataataa atgacaaagc catttcacct 10140  
ccaaaagatc taatatggac tagtttcctt agaaattaca tgccatcaca tatacaaaaat 10200  
tatatagaac atgaaaagt gaagttctct gaaagcgaca gatcaagaag agtactagag 10260  
tattacttga gagataataa attcaatgaa tgcgatctat acaattgtgt agtcaatcaa 10320  
agctatctca acaactctaa tcacgtggta tcactaactg gtaaagaaaag agagctcagt 10380  
gtaggttagaa tgtttgctat gcaaccaggat atgtttaggc aaatccaaat cttagcagag 10440  
aaaatgatag ccgaaaatat tttacaattc ttccctgaga gtttgacaag atatgggtat 10500  
ctagagcttc aaaagatatt agaattaaaa gcaggaataa gcaacaagtc aaatcgttat 10560  
aatgataact acaacaatta tatcagtaaa tgttctatca ttacagatct tagcaaattc 10620  
aatcaagcat ttagatatga aacatcatgt atctgcagtg atgtattaga tgaactgcat 10680  
ggagtacaat ctctgttctc ttgggtgcat ttaacaatac ctcttgcac aataatatgt 10740  
acatatacac atgcacccctcc tttcataaaag gatcatgtt gtaatcttaa tgaagttgt 10800  
gaacaaagtg gattatacag atatcatatg ggtggtattt agggctggtg tcaaaaaactg 10860  
tggaccattt aagctatatc attatttagat ctaatatctc tcaaaggaa attctctatc 10920  
acagctctga taaatggtgta taatcagtc attgatataa gtaaaaccagt tagacttata 10980  
gagggtcaga cccatgctca agcagattat ttgttagcat taaatagcct taaattgcta 11040  
tataaagagt atgcaggtat aggccataag cttaaaggaa cagagaccta tatatcccga 11100  
gatatgcagt tcatgagcaa aacaatccag cacaatggag tgtactatcc agccagttatc 11160  
aaaaaaagtcc tgagagtagg tccatggata aatacaatac ttgtatgattt taaagtttgt 11220  
ttagaatcta taggtagctt aacacaggag tttagaataca gaggggaaag cttattatgc 11280  
agtttaatat ttaggaacat ttgggttatac aatcaaattt ctttgcactt ccgaaatcat 11340  
gcattatgtt acaataagct atatttagat atattgaaag tattaaaaca cttaaaaact 11400  
ttttttaatc ttgtatgtat cgatatggcg ttatcattgt atatgtatcc ttgtatgt 11460  
tttgggtggtg gtgatcctaa ttgttatat cgaagctttt ataggagaac tccagacttc 11520  
cttacagaag ctatagtaca ttcatgtttt gtgttgagct attatactgg tcacgattta 11580  
caagataagc tccaggatct tccagatgtt agactgaaca aattcttgcac atgtgtcatc 11640  
acattcgata aaaatccaa tgccgagttt gtaacattga tgagggatcc acaggcgtta 11700  
gggtctgaaa ggcaagctaa aattactgtt gagattaata gattagcagt aacagaagtc 11760  
ttaagtatag ctccaaacaa aatattttctt aaaagtgcac aacattatac taccactgag 11820

attgatctaa atgacattat gcaaaatata gaaccaactt accctcatgg attaagagtt 11880  
gtttatgaaa gtctaccttt ttataaagca gaaaaaatag ttaatcttat atcaggaaca 11940  
aaatccataa ctaatatact tgaaaaaaca tcagcaatag atacaactga tattaatagg 12000  
gctactgata tcatgaggaa aaatataact ttacttataa ggatacttcc actagattgt 12060  
aacaaagaca aaagagagtt attaagttt gaaaatctt gtataactga attaagcaag 12120  
tatgtaaagag aaagatcttg gtcattatcc aatatagttag gagtaacatc gccaaagtatt 12180  
atgttcacaa tggacattaa atatacaact agcactatacg ccagtggtat aattatagaa 12240  
aaatataatg ttaatagttt aactcgtggt gaaagaggac ctactaagcc atgggttaggt 12300  
tcatctacgc aggagaaaaaa aacaatgccg gtgtacaata gacaagttt aaccaaaaag 12360  
caaagagacc aaatagattt attagcaaaa ttagactggg tatatgcac catagacaac 12420  
aaagatgaat tcatggaaga actgagttact ggaacacttg gactgtcata tgaaaaagcc 12480  
aaaaagttgt ttccacaata tctaagtgtc aattatttc accgttaac agtcagtagt 12540  
agaccatgtg aattccctgc atcaatacca gcttatagaa caacaaatta tcatttcgat 12600  
actagtccta tcaatcatgt attaacagaa aagtatggag atgaagatcatcgacattgt 12660  
tttcaaaattt gcataagttt tggctttagc ctgatgtcgg ttgtggaaaca attcacaac 12720  
atatgtccta atagaattat tctcataccg aagctgaatg agatacattt gatgaaacct 12780  
cctatattt caggagatgt tgatatcatc aagttgaagc aagtgataca aaaacagcat 12840  
atgttcctac cagataaaat aagtttaacc caatatgttag aattatttc aagtaacaaa 12900  
gcacttaaat ctggatctaa catcaattct aatttaatatt tagtacataa aatgtctgat 12960  
tattttcata atgcttatattt tttaagtact aatttagctg gacattggat tctaattatt 13020  
caacttatga aagattcaaa aggtatTTT gaaaaagatt ggggagaggg gtacataact 13080  
gatcatatgt tcattaattt gaatgtttc tttaatgctt ataagactta tttgctatgt 13140  
tttcataaaag gttatggtaa agcaaaatta gaatgtgata tgaacacttc agatcttctt 13200  
tgtgtttgg agttaataga cagtagctac tggaaatcta tgtctaaagt ttccctagaa 13260  
caaaaagtca taaaatacat agtcaatcaa gacacaagtt tgcatagaat aaaaggctgt 13320  
cacagttta agttgtggtt tttaaaacgc cttaataatg ctaaatttac cgtatgccct 13380  
tgggttgtt acatagatta tcacccaaca catatgaaag ctatatttac ttacatagat 13440  
ttagtttagaa tgggttaat aaatgttagat aaattaacca ttaaaaataa aaacaaattc 13500  
aatgatgaat ttacacatc aaatcttt tacatttagtt ataactttc agacaacact 13560

catttgctaa	caaaaacaaat	aagaattgct	aattcagaat	tagaagataa	ttataacaaa	13620
ctataatcacc	caaccccaga	aactttagaa	aatatatcat	taattcctgt	taaaagtaat	13680
aatagtaaca	aacctaaatt	ttgtataagt	ggaaataccg	aatctataat	gatgtcaaca	13740
ttctctaata	aaatgcata	taaatctcc	actgttacca	caagattcaa	ttatagcaaa	13800
caagacttgt	acaatttatt	tccaaatgtt	gtgatagaca	ggattataga	tcattcaggt	13860
aatacagcaa	aatctaacc	actttacatc	accacttcac	atcagacatc	tttagtaagg	13920
aatagtgc	cactttattt	catgcttcct	tggcatcatg	tcaatagatt	taactttgt	13980
tttagttcca	caggatgcaa	gatcagtata	gagtatattt	taaaagatct	taagattaag	14040
gaccccagtt	gtatagcatt	cataggtgaa	ggagctggta	acttattatt	acgtacggta	14100
gtagaacttc	atccagacat	aagatacatt	tacagaagtt	taaaagattt	caatgatcat	14160
agtttaccta	ttgaatttct	aagattatac	aacgggcata	taaacataga	ttatggtgag	14220
aatttaacca	ttcctgctac	agatgcaact	aataacattc	attggctta	tttacatata	14280
aaatttgcag	aacctattag	catcttg	tgcgatgctg	aattacctgt	tacagccaa	14340
tggagtaaaa	ttataattga	atggagtaag	catgtaagaa	agtcaagta	ctgttcttct	14400
gtaaaatagat	gcattttaat	cgcaaaat	catgctcaag	atgatattga	tttcaaattt	14460
gataacatta	ctatattaaa	aacttacgt	tgcctaggt	gcaagttaaa	aggatctgaa	14520
gtttacttag	tccttacaat	aggccctgca	aatatacttc	ctgttttga	tgttgtgca	14580
aatgctaaat	tgatttttc	aagaactaaa	aatttcatta	tgcctaaaaaa	aactgacaag	14640
gaatctatcg	atgcaaaat	taaaagctt	ataccttcc	tttgttaccc	tataacaaa	14700
aaaggaatta	agacttcatt	gtcaaaattt	aagagtgt	ttaatgggaa	tatattatca	14760
tattctatag	ctggacgtaa	tgaagtattc	agcaacaagc	ttataaacca	caagcatatg	14820
aatatcctaa	aatggctaga	tcatgtttt	aatttttagat	cagctgaact	taattacaat	14880
catttataca	tgatagagtc	cacatatacct	tacttaagt	aattgttaaa	tagtttaca	14940
accaatgagc	tcaagaaact	gattaaaata	acaggttagt	tactataca	ccttcccaac	15000
gaacagtaac	ttaaaatatc	attaacaagt	ttggtcaa	tttagatgcta	acacatcatt	15060
atattatagt	tataaaaaaaa	tatgcaaact	tttcaataat	ttagctact	gattccaaaa	15120
ttatcattt	attttaagg	ggttgaataa	aagtctaaa	ctaacaatga	tacatgtgca	15180
tttacaacac	aacgagacat	tagtttga	cactttttt	ctcgt		15225

<210> 14  
<211> 868

<212> DNA  
 <213> respiratory syncytial virus B 9320

<400> 14  
 agtcaacgca ctgccaggac tctagaaaag acctggata ctcttaatca tctaattgt 60  
 atatcctctt gtttatacag actaaaccta aaatctatag cacaatagc actatcagtt 120  
 ttggcaatga taatctcaac ctctctcata attgcagcca taatattcat catctctgcc 180  
 aatcacaag ttacactaac aacggttaca gttcaaacaa taaaaaaccacactgaaaaa 240  
 aacatcacca cctaccttac tcaagtctca ccagaaaggg ttagctcatc catacaacct 300  
 acaaccacat caccaatcca cacaattca gctacaatat caccaaatac aaaatcagaa 360  
 acacaccata caacaacaca agccaaaagc agaatcacca cttcaacaca gaccaacaag 420  
 ccaaggcaca aatcacgttc aaaaaatcca ccaaaaaaac caaaagatga ttaccatTTT 480  
 gaagtgttca attttgttcc ctgttagtata tgtggcaaca atcaactttg caaatccatc 540  
 tgcaaaaacaa taccaagcaa caaaccaaag aaaaaaccaa ccatcaaacc cacaaacaaa 600  
 ccaaccgtca aaaccacaaa caaaagagac cccaaacac cagccaaaat gatgaaaaaa 660  
 gaaaccacca ccaacccaaac aaaaaacca accctcaaga ccacagaagg agacaccagc 720  
 acctcacaat ccactgtgct cgacacaaacc acatcaaaaac acacaatcca acagcaatcc 780  
 ctccactcaa tcacctccga aaacacaccc aactccacac aaataccac agcaaccgag 840  
 gcctccacat caaattctac taaaaaaa 868

<210> 15  
 <211> 218  
 <212> DNA  
 <213> respiratory syncytial virus B 9320

<400> 15  
 attggcatta agcctacaaa acacactcct ataatacata aatatgaccc caacccgtaa 60  
 attccaacaa aaaaactaacc catccaaact aagctattcc ttaataaca gtgctcaaca 120  
 gttaagaagg ggctaattcca ttttagtaat taaaaataaa ggttaagccca ataacataaa 180  
 ttggggcaaa tacaaagatg gctcttagca aagtcaag 218

<210> 16  
 <211> 35  
 <212> DNA  
 <213> Artificial

<220>  
 <223> oligonucleotide primer; BglIIIsite, RSV B 9320 G

<400> 16

gatatcaaga tctacaataa cattggggca aatgc	35
<210> 17	
<211> 31	
<212> DNA	
<213> Artificial	
<220>	
<223> oligonucleotide primer; BglIIIsite, RSV B 9320 G	
<400> 17	
gctaagagat cttttgaat aactaaggcat g	31
<210> 18	
<211> 36	
<212> DNA	
<213> Artificial	
<220>	
<223> oligonucleotide primer; BamHIsite, RSV B 9320	
<400> 18	
atcaggatcc acaataacat tggggcaaat gcaacc	36
<210> 19	
<211> 36	
<212> DNA	
<213> Artificial	
<220>	
<223> oligonucleotide primer; BamHI site, RSV 9320 G	
<400> 19	
ctggcattcg gatccgtttt atgtaactat gagttg	36
<210> 20	
<211> 27	
<212> DNA	
<213> Artificial	
<220>	
<223> oligonucleotide primer	
<400> 20	
gatcccatgg ctcttagcaa agtcaag	27
<210> 21	
<211> 31	
<212> DNA	
<213> Artificial	
<220>	
<223> oligonucleotide primer	

<400> 21		
gtacggatcc gttgacttat ttgccccgta t		31
<210> 22		
<211> 25		
<212> DNA		
<213> Artificial		
<220>		
<223> oligonucleotide primer		
<400> 22		
gatcccatgg agaagtttgc acctg		25
<210> 23		
<211> 28		
<212> DNA		
<213> Artificial		
<220>		
<223> oligonucleotide primer		
<400> 23		
gtacggatcc tgagtgagtt gatcactg		28
<210> 24		
<211> 28		
<212> DNA		
<213> Artificial		
<220>		
<223> oligonucleotide primer		
<400> 24		
gcttggccat aacgattcta tatcatcc		28
<210> 25		
<211> 26		
<212> DNA		
<213> Artificial		
<220>		
<223> oligonucleotide primer		
<400> 25		
ggtagtataa tgttgtgcac ttttag		26
<210> 26		
<211> 25		
<212> DNA		
<213> Artificial		
<220>		
<223> oligonucleotide primer		

<400> 26		
ggtcacgatt tacaagataa gctcc		25
<210> 27		
<211> 30		
<212> DNA		
<213> Artificial		
<220>		
<223> oligonucleotide primer		
<400> 27		
cagatccttt taacttgcta cctaggcaca		30
<210> 28		
<211> 23		
<212> DNA		
<213> Artificial		
<220>		
<223> oligonucleotide primer		
<400> 28		
cttacgtgtg ccttaggtgc aag		23
<210> 29		
<211> 33		
<212> DNA		
<213> Artificial		
<220>		
<223> oligonucleotide primer		
<400> 29		
acgagaaaaaa aagtgtcaaa aactaatgtc tcg		33
<210> 30		
<211> 42		
<212> DNA		
<213> Artificial		
<220>		
<223> oligonucleotide primer		
<400> 30		
gtttttgaca cttttttct cgtggccggc atggtcccag cc		42
<210> 31		
<211> 33		
<212> DNA		
<213> Artificial		
<220>		

<223> oligonucleotide primer	
<400> 31	33
gatctagagc tccaaagcttg cggccgcgtc gac	
<210> 32	
<211> 46	
<212> DNA	
<213> Artificial	
<220>	
<223> oligonucleotide primer	
<400> 32	46
gggtacccccc gggtaatacg actcactata gggacgggaa aaaatg	
<210> 33	
<211> 24	
<212> DNA	
<213> Artificial	
<220>	
<223> oligonucleotide primer	
<400> 33	24
gttaaccttag agctctacat catc	
<210> 34	
<211> 24	
<212> DNA	
<213> Artificial	
<220>	
<223> oligonucleotide primer	
<400> 34	24
gtgtggtcct aggcaatgca gcag	
<210> 35	
<211> 29	
<212> DNA	
<213> Artificial	
<220>	
<223> oligonucleotide primer	
<400> 35	29
gacacagcat gatggtagag ctctatgtg	
<210> 36	
<211> 28	
<212> DNA	
<213> Artificial	

<220>		
<223> oligonucleotide primer		
<400> 36		
gctaagtgaa cataaaaacat tctgtaac		28
<210> 37		
<211> 26		
<212> DNA		
<213> Artificial		
<220>		
<223> oligonucleotide primer		
<400> 37		
ccattaataa tgggatccat tttgtc		26
<210> 38		
<211> 29		
<212> DNA		
<213> Artificial		
<220>		
<223> oligonucleotide primer		
<400> 38		
cacatagagc tctaccatca tgctgtgtc		29
<210> 39		
<211> 27		
<212> DNA		
<213> Artificial		
<220>		
<223> oligonucleotide primer		
<400> 39		
cattaatgag ggacccacag gctttag		27
<210> 40		
<211> 27		
<212> DNA		
<213> Artificial		
<220>		
<223> oligonucleotide primer		
<400> 40		
ctaaaggcctg tgggtccctc attaatg		27
<210> 41		
<211> 32		
<212> DNA		
<213> Artificial		

```

<220>
<223> oligonucleotide primer

<400> 41
catggtaat acactggttc aatttatata ca 32

<210> 42
<211> 32
<212> DNA
<213> Artificial

<220>
<223> oligonucleotide primer

<400> 42
tgtatataaaa ttgaaccagt gtattaacca tg 32

<210> 43
<211> 41
<212> DNA
<213> Artificial

<220>
<223> oligonucleotide primer

<400> 43
gtcttaaaaa acgaaataaaa acgctacaag ggcctcatac c 41

<210> 44
<211> 41
<212> DNA
<213> Artificial

<220>
<223> oligonucleotide primer

<400> 44
ggtagatggc cctttagcg ttttatttcg ttttttaaga c 41

<210> 45
<211> 24
<212> DNA
<213> Artificial

<220>
<223> oligonucleotide primer

<400> 45
gatgatgttag agctttaagt taac 24

<210> 46
<211> 24
<212> DNA

```

<213> Artificial		
<220>		
<223> oligonucleotide primer		
<400> 46		
gttaacttaa agctctacat catc		24
<210> 47		
<211> 44		
<212> DNA		
<213> Artificial		
<220>		
<223> oligonucleotide primer		
<400> 47		
ctaactggta aagaaagaga gcttagtgta ggtagaatgt ttgc		44
<210> 48		
<211> 44		
<212> DNA		
<213> Artificial		
<220>		
<223> oligonucleotide primer		
<400> 48		
gcaaacattc tacctacact aagctctctt tctttaccag ttag		44
<210> 49		
<211> 40		
<212> DNA		
<213> Artificial		
<220>		
<223> oligonucleotide primer		
<400> 49		
gtttaacaac caatgagctt aaaaagctga ttaaaattac		40
<210> 50		
<211> 40		
<212> DNA		
<213> Artificial		
<220>		
<223> oligonucleotide primer		
<400> 50		
gtaattttaa tcagctttt aagctcattg gttgttaaac		40
<210> 51		
<211> 23		

<212> DNA  
<213> Artificial

<220>  
<223> oligonucleotide primer

<400> 51  
cggtctaatg gatgataatt gtg 23

<210> 52  
<211> 23  
<212> DNA  
<213> Artificial

<220>  
<223> oligonucleotide primer

<400> 52  
atgaagctac tgcacaaaagt agg 23

<210> 53  
<211> 27  
<212> DNA  
<213> Artificial

<220>  
<223> oligonucleotide primer

<400> 53  
gtaatcatct tttgggtttt ttgggtgg 27

<210> 54  
<211> 33  
<212> DNA  
<213> Artificial

<220>  
<223> oligonucleotide primer

<400> 54  
ccaaaccatca aacccacaaa caaaccaacc gtc 33